

## LITERATURE OF MANUFACTURERS

Catalogues, bulletins and direct advertising material recently issued. Manufacturers are requested to send copies of new trade literature promptly to Electric Refrigeration News.

### Alaska

Catalog E-2 received from the Alaska Refrigerator Co., Muskegon, Mich., describes Alaska all porcelain and steel cabinets adapted for electric refrigeration. Exterior and interior views of cabinets ranging in capacity from 5 cu. ft. to 15 cu. ft. are included with specifications of each model. A description of insulation methods used in the illustrated cabinets is also contained in the catalog.

### Atmospheric Engineering

A folder issued by the Atmospheric Engineering Co., Houston, Tex., describes the Hydroerator, a cooling tower designed for operation with any water cooled Frigidaire compressor. A diagram showing layout of water tower in connection with the compressor and giving installation instructions is also included in the folder.

### Automatic Freezer

A booklet and folder received from the Automatic Freezer Corp., Detroit, Mich., describes the effects of corrosion on refrigerating units and presents the advantages of the Care-Free non-corrodible unit.

### Bozman

A folder distributed by R. H. Bozman & Bros., Baltimore, Md., describes two refrigerated display cases offered by them. The cases 35 in. wide, 46 in. high and made in lengths from 6 to 20 ft., have fronts of three thicknesses of polished plate glass and are insulated with sheet corkboard set in asphalt.

### Davies

The B. E. Davies Co., Inc., Philadelphia, Pa., has issued a catalog containing a listing of electric refrigerator parts and fittings carried in stock by them.

### Electrolux

Electrolux gas refrigerators are described in two folders issued by the Servel Corp., Evansville, Ind. Five models, one a combination refrigerator and gas stove, are illustrated in colors. In addition specifications, color process and a discussion of refrigeration by heat are included.

### Electro Vacuum

The Electro Vacuum Refrigerator Co., Inc., New York, N. Y., has sent in two folders, one of which is printed in Chinese for distribution to Chinese restaurant owners in New York. The other contains a number of letters from users and photographs of their installations. Two photographs and a description of the E. V. compressor are also included.

### Ice-O-Lator

The Ice-O-Lator gas refrigerator is described in four folders received from the National Refrigerating Co., New Haven, Conn. A number of models ranging in capacities from 6 cu. ft. to 15 cu. ft. are illustrated. In addition a small booklet contains a number of useful recipes.

### Ice-O-Matic

The Williams Oil-O-Matic Heating Corp., Bloomington, Ill., has issued four folders and a booklet which contains descriptions of the Ice-O-Matic line. Photographs and specifications of various models are included.

### Jack Frost

Five folders have been received describing the commercial and domestic lines offered by Jack Frost Refrigeration Limited, Toronto, Canada. One of the folders announces a new small domestic unit, while another is devoted to a new refrigerated display case for bottled drinks. Photographs of compressors ranging in size

from 1/2 to 5 H. P. A number of ice cream cabinets are illustrated in the other folders.

### Lipman

A booklet received from the General Refrigeration Co., Beloit, Wis., outlines briefly the history of refrigeration both natural and mechanical and contains descriptions of Lipman units. Photographs of 10 compressors ranging in size from 1/2 to 40 H. P. are included with a number of views of installations. In addition ten folders are devoted to Lipman commercial applications in different fields.

### Silverice

The B. Altman & Co., New York, N. Y., distributors for Silverice, has sent in a folder which presents the advantages of Silverice balls and describes the methods of using for cooling beverages.

### Welsbach

Four direct mail pieces issued by the Welsbach Co., Gloucester, N. J., describe its offering of domestic units. Views of nine models are contained in the folders with specifications for each. Two of these models are adapted for apartment house installation.

## BINDERS FOR THE NEWS NOW AVAILABLE

### Two Types Offered—Covers Stamped in Gold

Two types of binders for filing copies of ELECTRIC REFRIGERATION NEWS are now available for immediate delivery. One has a spring in the binding edge and it is only necessary to open the binder, pressing the backs together, to insert new issues or remove those already in place. This type of binder looks neat whether it contains one issue or twenty-six.

The other type, known as a multiple binder, has twenty-six metal strips in the binding edge, one for each issue of the year. Each time a copy is inserted a metal strip must be removed and replaced. It is a little more trouble to operate than the spring binder, but none of the type matter is obscured and it is less likely that copies will be removed.

Both binders have stiff covers and are attractively bound in good quality of black imitation leather with the name "Electric Refrigeration News" stamped in gold on the front cover. A binder of either type will be shipped postpaid on receipt of \$3.75. Please specify whether you want the spring back or multiple type.

### San Antonio Scene of G. E. Dealer Meeting and Public Exhibit

The Central Power & Light Co., San Angelo, Texas, and Wright Bros. San Antonio, Texas, are planning a General Electric refrigerator sales demonstration for dealers, builders, architects and the public. The exhibit will be held in San Antonio on October 22 at the Gunther hotel and in conjunction there will be a joint meeting of all sales and service men of the two organizations.

In addition to the discussion of sales plans and policies, it is planned to hold a demonstration of the new models to which the public and others interested will be invited. A noonday luncheon and a dinner dance will be features on the entertainment program.

## Subscription Order

ELECTRIC REFRIGERATION NEWS, 550 MACCABEES BUILDING, DETROIT, MICH.

Please enter subscription to Electric Refrigeration News.

United States and Possessions:

☐ \$2.00 per year. ☐ Three years for \$5.00.

All other Countries:

☐ \$2.25 per year. ☐ Two years for \$4.00.

I am enclosing payment in the form of

☐ Check ☐ P. O. Order ☐ Cash

Name

Street Address

City and State

Remarks:

## Sparklet Syphon Demonstrated to Gas Convention Visitors



Demonstrations of the Sparklets syphon were given in the Servel booth at the American Gas Association convention in Atlantic City, Oct. 8 to 12. Mrs. Nella Stewart, director of the home service department, Sparklets, Inc., is seen above talking to a group of visitors.

## "PLEASE CHANGE MY ADDRESS"

Recent movements of Electric Refrigeration News subscribers as indicated by requests for changes in mailing addresses.

Bach Co., Geo. W., Inc., from Box 364, Sioux City, Ia., to 1305 34th St., Des Moines, Ia.

Baird, J. W., from Francis Marion Hotel, Charleston, S. C., to O. Henry Hotel, Greensboro, N. C.

Bauder, George T., from 2276 Ft. Stokton Drive, San Diego, Calif., to 1238 Prospect Ave., La Jolla, Calif.

Bernstein, Milton, from c/o Bernstein Furniture Co., to 718 Washington St., Cumberland, Md.

Blodgett, M. A., from Box No. 105 to Elvin Apartment, Apt. F., Windsor, Ont., Can.

Boyes, Geo. W., from 2113 B. Maplewood Ave., Richmond, Va., to 426 Otterview Ave., Roanoke, Va.

Bruder, H. F., from 13553 Roselawn Ave., Detroit, Mich., to 147 Rhode Island Ave., Highland Park, Mich.

Clarke, G. C., from 1180 No. Berendo, Los Angeles, Calif., to 143 N. Hamilton Drive, Beverly Hills, Calif.

Cleveland, Melvin C., from 305 Coleridge St., San Francisco, Calif., to Gen. Delivery, Everett, Wash.

Commercial Auto Body Co., from 5187 Delmar Ave., to 5649 Cabanne, St. Louis, Mo.

Dallas A. Shafer & Co., R. S., Montgomery, from 1349 W. Broad St., to 316 East Grace, Richmond, Va.

Dunphy, R. J., from 4318 Pleasant Ave., S., to 3601 34th Ave., S., Minneapolis, Minn.

Flint, L. B., from 86 E. St., Apt. 5, to 1610 S. 4th East, Salt Lake City, Utah.

Gilbert, Chas. M., from 715 Gwynne Bldg., Cincinnati, O., to 205 Transportation Bldg., Indianapolis, Ind.

Gleason, L. D., from 2018 Essay St., Richmond, Ind., to 1204 West St., Austin, Minn.

Green, P. E., from 1621 1/2 So. Burlington Ave., to 2842 W. 12th St., Los Angeles, Calif.

Green, Willis W., from P. O. Box 181, Salt Lake City, Utah, to No. 3 Union Arms Apt., Syracuse, N. Y.

Hart & Burmeister, from Jerrold at Napoleon St., to California Electric Ref., Inc., 1142 Sutter St., San Francisco, Calif.

Hibbard, S. B., from 644 Everett St., Portland, Ore., to 3427 S. Main St., Los Angeles, Calif.

Jaeger, Eugene R., from 307 N. Ramport Blvd., Los Angeles, Calif., to 3719 Louisiana St., San Diego, Calif.

Kansas City Ironworks Co., from 3316 Broadway, Kansas City, Mo., to 2506 N. Tenth, Kansas City, Kan.

Kelvinator Dalls, Inc., from 1928 Bryan St., to 3628 Normandy, Dallas, Tex.

Lehnhoff, R. G., from 475 Riddle Rd., to 322 Joslyn, Cincinnati, O.

Leiter, Clarence R., from Kelvinator, Inc., 1919 Washington Ave., St. Louis, Mo., to 518 E. Jefferson, Kirwood, Mo.

Mathis, Frederic R., from 331 McHenry Ave., Crystal Lake, Ill., to 5726 Winthrop Ave., Chicago, Ill.

Mead, A. E., from P. O. Box 673, Raymondville, Tex., to P. O. Box 673, San Benito, Tex.

Mercer, Herbert, from c/o American Refrigerator Co., 121 Main St., to 40 S. Seventh St., Zanesville, O.

Merchant, A. P., Welsbach Co., 100 Federal St., Boston, Mass., to 4 Mason St., Gloucester, Mass.

Miles, B. H., from 1119 East Dive St., Bloomington, Ill., to 414 S. First St., Ocala, Fla.

Mitchell, J. H., Ba. ron G. Collier, Inc., from Room 208, 231 S. La Salle St., Chicago, Ill., to 17 Ellison Ave., Bronxville, N. Y.

Monjuan, Geo., from 5601 Westend Ave., to 1555 Hollywood Ave., Chicago, Ill.

Oliphant, J. E., from 383 Main St., to 357 Brightwood Drive, Marion, O.

Olsen, C. R., from N. Y. Edison Co., New York City, to Brooklyn Union Gas Co., 180 Remsen St., Brooklyn, N. Y.

Overhoff, B. F., Domestic Electric Co., from 109 N. Tenth St., to 908 Pine St., St. Louis, Mo.

Pampa Hardware & Implement Co., from Pampa, Tex., to Panhandle Gas Refrigerator Co., Box 2320, Amarillo, Tex.

Perillat, A. J., from 1317 13th Ave. S., to 321 N. 71st St., Seattle, Wash.

Pinkerton, H. K., from 714 S. Oak St., to 1237 S. Main St., Ottawa, Kansas.

Redman, L. L., from 4-A Krug Circle, to 2578 Duck Creek Rd., Norwood, Ohio.

Roth, L. P., from Servel Corp., 1631 Poplar St., Oakland, Calif., to Refrigeration Service, Inc., 1503 W. Pico St., Los Angeles, Calif.

Scott, E. E., from 213 11th St., Sharpsburg, Pa., to Verona, Pa.

Sheakley, B. W., from R. D. No. 1, Butler, Pa., to 11 Winchell St., Uniontown, Pa.

Smith, C. G., from Van Antwerp Place, Avondale, Cincinnati, Ohio, to The Plaza Hotel, Milwaukee, Wis.

Steding, E. A., from 4143 Carter Ave., Norwood, O., to 3700 Glenmore, Cincinnati, Ohio.

Stoplet, D. S., from 235 South St., Waukegan, Wis., to 404 Beaver Bldg., Madison, Wis.

Troutwine, Harry, from 518 E. Jefferson Ave., Kirkwood, Mo., to 171 Sidney St., Cambridge, Mass.

Van Patten, D. W., from 30 Hadley Ave., to 20 Telford Ave., Dayton, Ohio.

Watson, F. E., from 52 Batavia, to 44 James St., W. River Rouge, Mich.

Welsbach Co. of New England, from G. P. O. Unit 3, to 89 Federal St., Boston, Mass.

Wight, L. S., from 5716 Harrison, Minneapolis, Minn., to 3800 Bales Ave., Kansas City, Mo.

Willis, R. J., 1550 E. Broad St., Apt. 302, Columbus, Ohio, to c/o Crosley Radio Co., Cincinnati, Ohio.

Wishart, W. W., from 3741 Leland Ave., to 2710 N. Troy, Chicago, Ill.

## THE CONDENSER

ADVERTISING RATE fifty cents per line (this column only).

SPECIAL RATE if paid in advance—Positions Wanted—fifty words or less, one insertion \$2.00, additional words four cents each. Three insertions \$5.00, additional words ten cents each. All other classifications—fifty words or less, one insertion \$3.00, additional words six cents each. Three insertions \$8.00, additional words sixteen cents each.

### POSITIONS AVAILABLE

Kelvinator Service man with knowledge of commercial. \$35.00 weekly. Permanent. Write fully giving references. Kelvinator-Miami, Inc., 440 W. Flagler Street, Miami, Florida.

### POSITIONS WANTED

Sales Executive. Sales manager of wide experience, sales and market analysis, advertising, price structures, full knowledge of specialty selling, wholesale and retail and resale. At present employed, available on reasonable notice. Address confidentially Box No. 111.

Manufacturers Representative. Covering New York, New Jersey, Pennsylvania, personally acquainted with jobbers and utility company officials, guarantee widespread distribution in Eastern territory. Interview arranged at your factory or in New York. Box No. 112.

Sales Engineer for Large Distributor—Somewhere there is a distributor of refrigeration who has not yet solved his merchandising problems. Refrigeration knowledge plus "know how" is needed. I have both. Now traveling but desire to get off the road. Best references from present employer. Available immediately. Address Box No. 121.

Service Manager—Experienced and capable of handling all details of a department, planning and laying out installations, commercial and domestic, as well as directing. Can personally diagnose and service equipment troubles. Want a connection that can become permanent. Within 125 miles of Philadelphia preferred. Box No. 120.

Refrigeration engineer, with eight years' experience in electric refrigeration, includes research engineering, production and service. Graduate Electric and Mechanical Engineer. Have held major executive positions with three of the largest manufacturers. Available when greater opportunity is offered. Box No. 119.

**Refrigeration Service Co., Inc.**  
SERVICE SPECIALISTS—Installations, Alterations, Repairs, Inspection, Reconditioning, Maintenance  
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## PATENTS

Searches, reports, opinions by a Specialist in Refrigeration

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342 Madison Ave., N. Y.

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## DRINKING WATER FAUCETS

for Refrigerators - Water Coolers  
New model now available for use on city water pressure

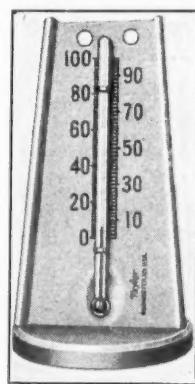


**Cordley & Hayes**

1 Leonard St. New York City

## TAYLOR THERMOMETER GIVES READY CHECK ON CABINET TEMPERATURES

A white enameled metal back and composition base make the Taylor refrigerator thermometer suitable for household use. The tube is filled with red fluid and the scale figures are large and easily



read. The thermometer stands anywhere in the refrigerator, and furnishes an easy check on whether the temperature is too high for perfect cooling, or so low as to cause freezing and food spoilage. The scale range is from zero to 100 degrees F. The thermometer is easily cleaned and therefore sanitary.

It is manufactured by Taylor Instrument Companies, Rochester, N. Y.

## NEW DEALERS & DISTRIBUTORS

Recent appointments announced by manufacturers and new sales outlets reported from the field.

### Servel

Distributors:  
Approved Appliance Association, Baltimore, Md.  
Midland Implement Co., Billings, Mont. (Servel-Electrolux).  
Pikesville Refrigeration Co., Pikesville, Ky. (Servel-Electrolux).

Dealers:  
Hughes Electric Co., Bismarck, N. D. (Servel).  
New York Oil Co., Casper, Wyo. (Electrolux).  
Toulumne Light & Power Co., Sonora, Calif. (Servel and Electrolux).  
Burritt's Electric Shop, Bishop, Calif. (Servel and Electrolux).  
Economy Electric Co., Livermore, Calif. (Servel).  
M. O'Neill Co., Akron, Ohio (Servel-Electrolux).  
H. T. Arnold, North Chatham, N. Y. (Servel-Electrolux).  
Baldwin Radio Shop, 129 Vermillion St., Danville, Ill. (Electrolux).  
H. L. Wolf Plumbing & Heating Co., McPherson, Kan. (Electrolux).  
Emmert Brothers, Zanesville, Ohio (Electrolux).  
Bridgeton Gas Light Co., Bridgeton, N. J. (Electrolux).  
C. Carisch & Son, River Falls, Wis. (Servel).  
Home Appliance Co., Cedar Rapids, Iowa (Servel).

### Sparklets

Distributors:  
City Coal Co., Ltd., Calgary, Canada.  
Lyman, Ltd., St. Paul St., Montreal, Canada.  
Matthews Electric Supply Co., Birmingham, Ala.

Dealers:  
Newall Electric Co., Orlando, Fla.  
Kelvinator-Miami, Inc., 449 W. Flagler, Miami, Fla.  
Coal Producers, Ltd., Calgary, Canada.  
Public Service Electric & Gas Co., Plainfield, N. J.  
Robert E. Chaplin, Coalport, Pa.  
Industrial Sales Engineering Co., Inc., Newark, N. J.  
Automatic Electric Equipment Co., Jacksonville, Fla.  
Detroit Edison Co., 2000 Second Ave., Detroit, Mich.  
United Natural Gas Co., 37 Church St., Buffalo, N. Y.

## E. T. L. Service for Domestic and Commercial Electric Refrigeration

Testing and experimental laboratory service for manufacturer, distributor, central station  
Test data exclusive property of client

**ELECTRICAL TESTING LABORATORIES**  
50th Street and East End Avenue, NEW YORK CITY, N. Y.



# ELECTRIC REFRIGERATION NEWS

The business newspaper of the refrigeration industry

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## NATIONAL CODE FOR MULTIPLE SYSTEMS ADOPTED BY BOARD

Fire Underwriters Issue Rules  
Effective December 1

FOLLOWING is the installation code for multiple refrigerating systems recently adopted by the National Board of Fire Underwriters, 85 John St., New York, N. Y., to become effective on December 1, 1928. A preliminary draft of the code submitted for comment and criticism following a meeting of engineers called by the Board July 31 was published in the News Sept. 12. The complete text of the code and the explanatory notes in the booklet issued by the Board are as follows:

"Foreword—This code covers only the installation features of the type of systems commonly known as Multiple Refrigeration Systems, which supply the refrigerant direct to evaporators in various parts of a building. Some of these systems use a refrigerant which is of a readily flammable nature; others involve danger to life because of the toxic or irritant nature of the refrigerant.

"The following code was prepared after a survey of the use of these multiple systems and has been agreed to by a majority of the manufacturers as providing reasonable safeguards for such systems. As with all appliances where there is a life or fire hazard, good, conscientious workmanship is of prime importance and adequate maintenance follows closely in its relative stand.

"This code has been prepared to bring about a reasonable degree of protection and should be considered as establishing the probable minimum of safe requirements. It is believed that this code should be made a basis for municipal ordinances and state laws. Cities adopting this code as an ordinance should provide for the enforcement through the fire department, fire prevention bureau or other properly constituted body, and should make provision for an inspection before a permit is issued and should provide for adequate penalties in case the regulations are not lived up to."

### Installation Code for Multiple Refrigeration System

#### 1. Application of Rules.

The following code is intended to apply to the installation of multiple refrigerating systems as herein defined.

#### 2. Multiple Systems Defined.

The term "multiple refrigerating system" shall mean and include all systems in which the refrigerant from a common source is delivered to two or more separate cabinets each containing one or more evaporators.

#### 3. Inspections and Approval.

(a) Multiple systems shall be of approved makes and patterns.

(b) No multiple system shall be placed in operation until the complete installation has been tested by the installer in the presence of the authority enforcing this code. A certificate of approval shall be

(Concluded on Page 6, Col. 1)

## GIBSON BUYS AMERICAN REFRIGERATOR COMPANY

The American Refrigerator Co., of Peru, Ind., was purchased by the Gibson Refrigerator Co., of Greenville, Mich., on Nov. 12. It will be operated as a separate corporation under the former policies and under the management of Howard L. Grimm, vice-president and sales manager. Mr. Grimm will continue in the same capacity in the new company.

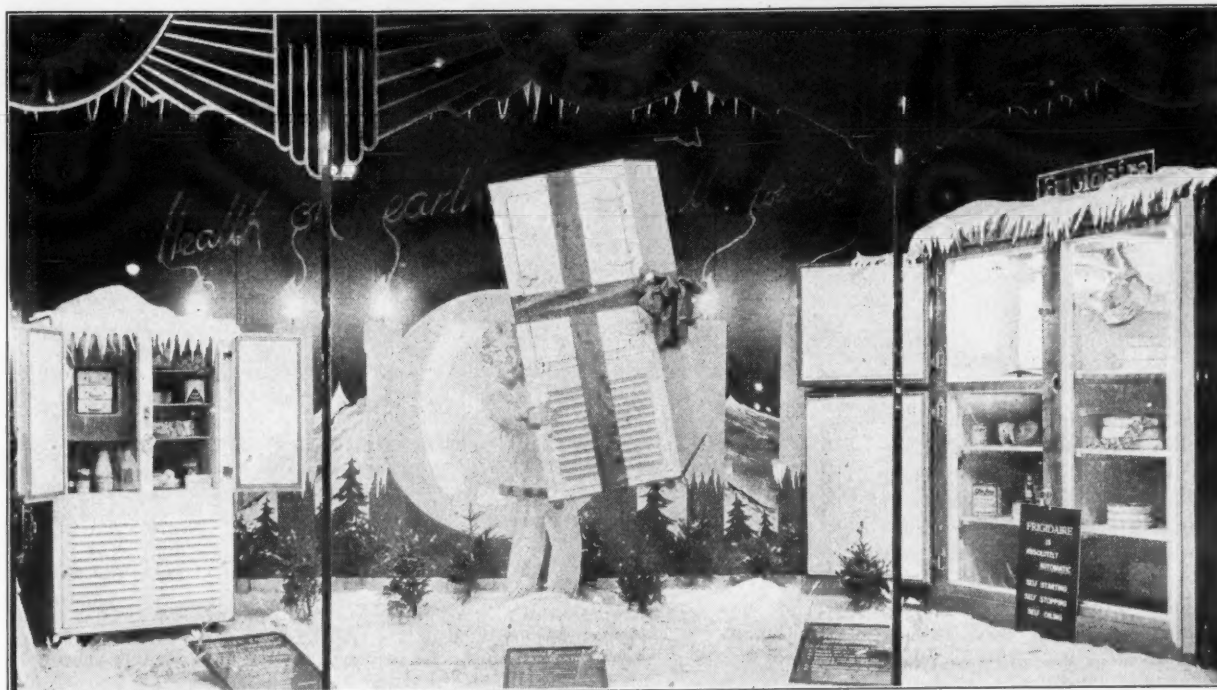
The Gibson interests plan to materially expand the business of the Peru concern. A complete line of commercial cabinets, showcases and fixtures will be manufactured together with a line of ice boxes for furniture dealers and ice dealers.

The American Refrigerator Co. will be one of a group of refrigerator companies operated by the Gibson interests. The other companies in this group are Belding-Hall Refrigerator Co., Belding, Mich. Hall Refrigerator Co., Montcalm Refrigerator Co., and Gibson Refrigerator Co., all located in Greenville, Mich.

## COMING NEXT ISSUE

A special directory listing manufacturers of accessories, parts and materials for refrigeration systems will be published in the next issue, Dec. 7. A complete directory of all classifications will appear Jan. 2, 1929.

## "Look What Santa Brought To Us!" Is Child's Appeal In English Window Display



Holiday Greetings from Merrie England! Frigidaire Limited says this is the most successful holiday window trim they've ever used in Great Britain. The little girl holding the baby model and the model itself are fibreboard cutouts but the ribbon bow is real. Dwarf pines are planted in the snow along the back of the window, and written in the snow mound in front of the figure is the happy exclamation "Look what Santa Claus brought to us!" The giant electric candles in the rear are the source of some skywriting on the backdrop which reads—"Health on earth, good will towards men."

## N. E. L. A. COMMITTEE TO COMPLETE PLAN IN NEW YORK NOV. 23

C. L. Dunn, of Ohio Public Service,  
Heads New Activity

FOLLOWING meetings of the National Electric Light Association, Refrigeration Committee, under the chairmanship of C. L. Dunn of the Ohio Public Service Co., held in New York on Oct. 15, Cleveland Oct. 22, and in New York again on Nov. 9, the sub-committee of this group will meet on Nov. 23 to complete the formulation of a national and local plan of cooperation to promote the use of electric refrigeration from the standpoint of good health and food preservation.

This committee consists of J. Hall Truman, Jr., Earl Whitehorn, J. A. Corcoran, C. E. Greenwood, and W. J. Daily. At the Oct. 15 meeting in New York various programs were discussed with the decision that the committee should foster the plan mentioned above. The Cleveland meeting was held for the purpose of deciding the extent to which the national plan could be carried out and how it should be tied in with local activities, also the industries to be included.

The membership of the committee follows:

### Refrigeration Committee

C. L. Dunn, Chairman, The Ohio Public Service Company, Box 693, Cleveland, Ohio.  
F. D. Pemberton, Chairman, Merchandising Bureau, Public Service Company of N. J., Newark, N. J.

### Members-at-Large

J. Hall Truman, Jr., Stevens & Wood, 120 Broadway, New York City, N. Y.  
G. B. Buck, Public Service Co. of Colorado, Denver, Colo.  
H. E. Young, Northern States Power Co., Minneapolis, Minn.  
M. C. Terry, Westinghouse Mfg. Co., Mansfield, Ohio.  
Henry W. Hennig, Public Service Co. of N. J., Newark, N. J.  
P. Lorch, New York Edison Co., Bronx, N. Y.  
E. C. Bennett, Bennett-Watts-Haywood Co., 360 N. Michigan Ave., Chicago, Ill.  
T. P. Kindig, Electrical World, 10th Ave. at 36th St., New York City, N. Y.  
W. R. Winans, Frigidaire Corp., 1775 Broadway, New York City, N. Y.  
P. B. Zimmerman, General Electric Co., 500 Hanna Bldg., Cleveland, Ohio.  
W. E. Clement, New Orleans Public Service Co., New Orleans, La.  
Cyrus Barnes, Charles H. Tenney & Co., 200 Devonshire St., Boston, Mass.  
Stanley Tabor, Iowa Nebraska Light & Power Co., Lincoln, Neb.  
J. A. Corcoran, Kelvinator Corp., 14250 Plymouth Road, Detroit, Mich.  
Earl Whitehorn, Electrical World, 10th Ave. at 36th St., New York City, N. Y.  
J. E. North, Electrical League, Hotel Statler, Cleveland, Ohio.  
F. M. Cockrell, Electric Refrigeration News, Detroit, Mich.

### Educational Plan Sub-Committee

J. Hall Truman, Jr., chairman,  
Earl Whitehorn  
J. A. Corcoran  
Members of Educational Plan Sub-Committee in advisory capacity:  
C. F. Greenwood  
W. J. Daily.

## HAVE YOU ORDERED A BINDER FOR YOUR FILE COPIES OF THE NEWS?

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## ICE MEN HOLD 11TH ANNUAL CONVENTION NOV. 13-16--DETROIT

C. K. Woodbridge and David  
Brown Speak at Opening  
Session

THE National Association of Ice Industries held its eleventh annual convention, Nov. 13 to 16, at the Book-Cadillac Hotel, Detroit, Mich. The sessions were opened by J. E. Muckermann, president of the organization. Among the speakers of the first day were C. K. Woodbridge, president of the Kelvinator Corp., and David Brown, president of General Necessities Corp.

Mr. Muckermann pointed out that the increase in the use of ice in the last year amounted to 8 per cent and stated that the reason for the increase was that the competition given by mechanical refrigeration awakened the ice industry to work in sales. He said the organization was laying the groundwork for an educational campaign which will involve advertising, soliciting and modern means of selling. In this campaign a home service department will be used with practical demonstrations given in the home on the practical use of ice.

Business sessions were held each morning, Tuesday morning being the business meeting of the convention. Wednesday morning dealt with educational features with talks by Mary E. Pennington, E. L. Bennett, John Benson, and Dempster MacMurphy. M. H. Robbins was in charge of a general discussion. Thursday

(Continued on Page 2, Col. 2)

## REFRIGERATION HAS PROPER SETTING AT DETROIT FOOD SHOW

Public Displays Great Interest in  
Food and Its Preservation

REFRIGERATOR exhibits were outstanding in attractiveness in the appropriate setting which the Seventh Annual Food Show and Household Exposition afforded. Large numbers attended the show which was held in Convention Hall, Nov. 8 to 18, and viewed that which is new in food and food preservation.

Servel Sales, Inc., showed several refrigerators and units. The 21-A unit, suitable for remote installation was included. Three refrigerators available in colors were displayed, with the green and tan shown at the exhibit. Two water coolers, one of bottle type, the other connected with city service, were also displayed.

Michigan Chandelier Co. displayed three Rhineland cabinets, Servel equipped. An attractive percolator set or smoking stand was offered with each domestic refrigerator sold during the show, by Servel.

Electric Utilities Corp. displayed six General Electric refrigerators. A portable model, suitable for hotels or hospitals was included. The new G. E. display refrigerator was also shown.

Frigidaire Corp. featured a domestic refrigerator, all porcelain, steel gray trimmed, with sound proof construction. Eleven domestic refrigerators were displayed. The Frigidaire motor was exhibited mounted on springs as in the installation. An Oriole meat cabinet and storage cooler, Frigidaire equipped, were included in the display.

A cut-away refrigerator, showing insulation, general construction and motor was displayed by Welsbach-Detroit Co. Six domestic models were shown. These included one in deep green and one with design in color on an ivory background. A remote installation was in operation.

Absopure Division of General Necessities Corp. exhibited a 1-ton commercial unit, two bottle type water coolers, a Dry-Kold display counter and a walk-in cooler, all being electrically cooled. Several domestic models were shown.

Dalrymple - Kelvinator Co. displayed three small domestic models. Units for commercial installations and the larger domestic uses were shown.

In the exhibit of Copeland Products, Inc., two sizes of the De Luxe line were shown in colors, green and gray, equipped with electric light on the interior. A Seeger cabinet in gray, Copeland equipped, was displayed and another Seeger cabinet, Copeland equipped, suitable for use in the small commercial establishment, was in white.

Three domestic models including an attractive one in dark green, were shown by Universal Cooler Corp. A 1-6 hp. condensing unit was displayed in operation and a 1 hp. unit was shown refrigerating an Oriole meat counter equipped with brine tank and two other refrigerators.

Electric refrigerators were used in many of the food displays. Sterling, Wilson, Hamblin Co. displayed Sterling Brand oysters in a meat display counter, Kelvinator equipped. The Junket Co. served samples of their products in attractive forms from a Copeland model. Orling Brothers, meat packers, used a Frigidaire equipped meat counter for an extensive exhibit of meats. Guntrath-Lorenzen Co., Chicago, used a Kelvinator refrigerator in connection with their display and serving of a 2-minute dessert. Gordon Creamery served Frost Bite ice cream from a Frigidaire cabinet. Royal Baking Powder Co. used a Copeland domestic refrigerator in their booth where they served samples of food prepared with Royal Baking Powder. Wm. Suchner and Sons displayed meats in a McCray display case, Frigidaire equipped.

## KNOX PRODUCTS CO. AND GLACIER CORP. MERGED

The Knox Products Co., of Wilmington, Del., and the Glacier Corp. of Kennett Square, Pa., have merged their interests and formed the Refrigerating Equipment Co. of Wilmington, which on Sept. 26 acquired the business and assets of the two firms.

Officers and directors of the new firm are as follows: Severn P. Ker, Jr., of Youngstown, Ohio, president; G. B. Scarlett, of Kennett Square, vice-president; W. W. White, of Kennett Square, secretary and treasurer; Severn R. Ker, Sr., of Youngstown, W. A. Thomas, of Youngstown, and J. W. Marshall, of Yorklyn, Ohio, directors; W. G. Finch, sales engineer, and Charles O. Duevel, Jr., refrigerating engineer.

## IN THIS ISSUE

A special directory listing all manufacturers of refrigerator cabinets for use with mechanical refrigeration systems appears in this issue. See pages 20, 21, and 23.



## AUGMENTED COPELAND LINE RESPONSIBLE FOR STEADY SALES INCREASE

**Business in First 10 Months Shows  
50% Increase Over Same  
Period Last Year**

Business for the Copeland Products, Inc., of Detroit, showed an increase in shipments for the first 10 months of 1928 of 50 per cent over the same period a year ago, according to a statement by George W. Mason, president of the Company.

Much of this increase is attributed to the rounding out of the Copeland line and a considerable extension of the company's sales outlets.

Early this year Copeland entered the apartment house field with a line of multiple installation equipment. At the same time, it extended its domestic line to include the color field. These boxes offered the housewife a wide range of color and at the same time made it possible to change from one color to another. In order to do this, only the tops and louvers were finished in color, and these were made easily interchangeable. To this was added the Copeland-Seeger line of all porcelain cabinets in white or color used with a cirrus effect and 3 new models in the lower priced field known as the metal line.

Copeland's commercial line of condensing units has been increased so that it includes models operating with motors from 3/4 hp. to a twin-cylinder unit with a 1 1/2 hp. motor. In the multiple unit installation field Copeland's line now covers cooling coils of from 8 cu. ft. capacity up to 25 cu. ft. and running from two trays with 56 ice cubes up to five trays handling 180 cubes at one freezing.

Another Copeland development is the new zero tube, which embodies both the fin and brine system. The zero tube consists of a tinned copper tube, four inches in diameter, to which are affixed copper fins seven inches square. Inside the tube are the customary coils such as are used in a brine tank. Both ends of the tube are closed after it has been filled with brine. The tubes, ranging in length from 12 inches to 8 feet, are made to fit practically every type of installation and can be used either in series or in parallel.

Water cooler and equipment for ice cream cabinets and milk coolers are also included in the Copeland line.

In addition to electric refrigeration, Copeland also controls certain rights to the manufacture and sale of the new Silica Gel type of refrigeration for commercial and domestic purposes. To manufacture this, a subsidiary company was formed early this Summer known as the Copeland Silica Gel Corporation. This company will utilize the distribution system of the Copeland Products, Inc., as well as the services of its officers and personnel.

"The period of flux in the electric refrigeration is at an end and has been for some time," said Mr. Mason. "A continued growth may be expected for many years to come. Like the automobile, it has taken several years to educate the public to regard electric refrigeration as a necessity, but once accepted it is here to stay."

## OWNER OF THREE DENVER CAFES FINDS ELECTRIC COOLING ECONOMICAL

"It has taken us only three months to learn that we have been all wrong about restaurant refrigeration," said M. J. Keating, manager of La Bonita, Denver's exclusive Mexican cafe. "We are operating two other places besides this one, the others are old Denver cafes."

"Ice bills in the other establishments run as high as seventy dollars a month apiece. The La Bonita Frigidaire system has cost about eight dollars a month for operation."

"We did not believe it possible to attain such a saving until we equipped our new place with electric refrigeration, and now we would not fool with a restaurant without it," he said.

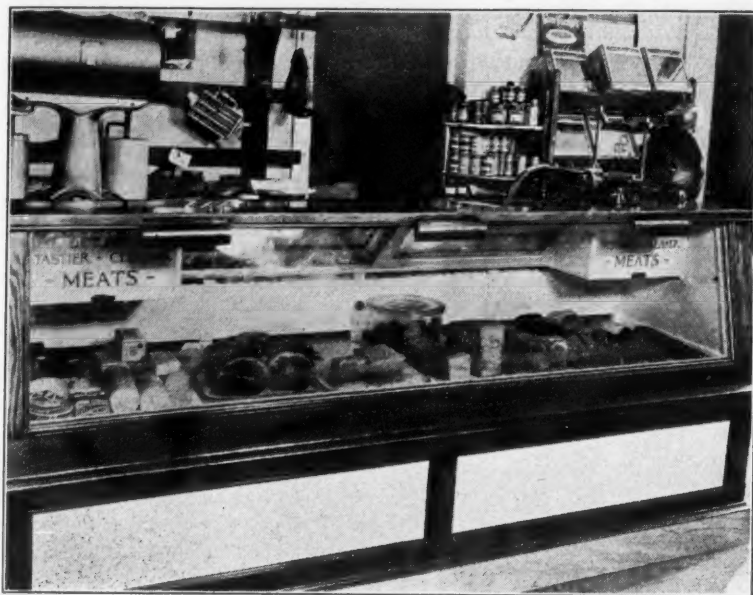
"For about eight dollars a month, no more, we cool our large food box, drinking water, beer and charged water fountain, and ice cream container," Mr. Keating explained.

The fountain, of course, is near the front, the water cooler is near the rear of the cafe, and the box is in the kitchen. The compressor, which is a one-half ton type C Frigidaire, is located in the basement.

"There is not only a saving of money in our system, but it is cleaner. It keeps food in excellent condition because of the even temperature at all times. Melting ice rots the inside of a box, and electric refrigeration will not do it," Mr. Keating averred.

"And another thing," he added, "our monthly payments are almost a fourth of what ice would cost us a month judging by our other places. That twenty dollars is not running down the sewer, either, it is a substantial investment."

## Welsbach Cross-Fin Coils Installed in Norristown Market



The Philadelphia Suburban Counties Gas and Electric Company has been active in selling Welsbach commercial equipment in the territory surrounding Philadelphia. The photo at the left above illustrates a show case equipped with the latest type of Welsbach fin type evaporators. This unit is in the store of Howard Hackman, Norristown, Pa. A rear view of the same case is shown at the right above.



kegon, Mich.; American Refrigerator Corp., Peru, Ind.; Bohn Refrigerator Co., St. Paul, Minn.; The Celotex Co., Chicago, Ill.; Cork Import Corp., New York, N. Y.; Fairbanks, Morse & Co., Chicago, Ill.; Frick Co., Inc., Waynesboro, Pa.; Howe Ice Machine Co., Chicago, Ill.; Illinois Refrigerator Co., Morrison, Ill.; J-S Refrigerator Division, John Schroeder Lumber Co., Milwaukee, Wis.; La Crosse Refrigerator Corp., La Crosse, Wis.; Leonard Refrigerator Co., Grand Rapids, Mich.; McKee Refrigerator Co., Cobleskill, N. Y.; Mundet & Son, Inc., New York, N. Y.; Reol Refrigerator Co., Baltimore, Md.; The Vilter Mfg. Co., Milwaukee, Wis.; York Ice Machinery Corp., York, Pa.

## COOLING COMPARTMENT OVERHEAD IN SEEGER COMMERCIAL CABINETS

The Seeger Refrigerator Co. announces a new line of commercial cabinets with overhead compartment for zero tubes and cross fin coils. The choice of fifteen different cabinets in all porcelain and in lacquer exterior wood lined, is offered, giving sales opportunities to dealers from many different businesses, trades and institutions requiring refrigeration.

Placing the coils or tubes overhead, it is claimed makes installation easier, servicing easier, and for the consumer a better looking and more convenient refrigeration cabinet. The elimination of all partitions gives a better circulation of air throughout, and maintains a constant cold temperature. Tests show that there is very little difference in temperature between the top and the bottom of the cabinet.

Another advantage is the gain in storage space by having no unit chamber within the storage chamber, all of the room being utilized for food storage.

The porcelain and glass display counter has its zero tube or cross fin coil compartment along the back of the counter, it being more accessible.

## REFRIGERATION GETS A PLACE AT CARBONATED BEVERAGE CONVENTION

**Kelvinator, Lipman, Autodrink  
Included in Exhibits**

Four thousand delegates attended the annual convention of the American Bottlers of Carbonated Beverages, Nov. 14-16 and the Carbonated Beverage Exposition, Nov. 12-16, at the Statler Hotel and Convention Hall, Detroit.

Scheduled meetings included a discussion of beverage dispensing devices of which E. C. Stothart was chairman, and another meeting on water cooling and refrigeration of which F. B. Hunt was chairman.

The exhibits of beverage bottling, cooling, and dispensing equipment in Convention Hall were largely attended. A number of these included electric refrigeration for cooling. Kelvinator Corp., Detroit, supplied several combination ice cream and bottled drink cooling cabinets; The General Refrigeration Co., Beloit, Wis., had its equipment in use in connection with several different makes of beverage water cooling units.

Autodrink Corp., Graybar Bldg., New York, attracted considerable attention with its Autodrink cascade beverage dispenser. This outfit consists of a dispensing unit to be placed on top of the counter and a cooling unit located underneath. The beverage is pumped from a tank cooled by electric refrigeration to the dispensing unit on top of the counter where it flows down over an illuminated cascade.

An orchestra and a series of educational exhibits contributed toward making the exposition interesting to the general public as well as to the delegates.

## NATIONAL ASSOCIATION OF ICE INDUSTRIES IN ANNUAL CONVENTION

(Concluded from Page 1, Col. 3)

morning was taken up with discussions of home-field work. The call to order was followed by a talk on "Selling More Ice in 1919" by Robert McKnight, director of publicity of the organization.

Thursday afternoon sessions were held for field workers, and Canadian ice men. Friday morning was termed the "Industry Session" and talks were on uniform accounting, accident prevention and commission regulation.

Tuesday afternoon the delegates were entertained with a visit to Ford Airport as guests of ice men of Detroit. Luncheon was served at the Prince Edward Hotel, Windsor, Can., on Wednesday, and Thursday evening a banquet followed the day's program. The meeting closed with a directors' session Friday afternoon.

On the same floor with the meetings was an exhibit of accessory commodities of the ice industry. Included in the exhibits were those of the following companies: Alaska Refrigerator Co., Mus-

*These Achievements of*

# ZEROZONE ENGINEERING

*are your assurance of  
steadily Increasing Sales*

LIFETIME  
PERFORMANCE

FINEST  
MATERIALS

PERFECTED  
DESIGN

QUIET  
OPERATION

UNIFORMITY IN DESIGN  
AND CONSTRUCTION




With thousands of installations operating under every climatic condition in all parts of the country from coast-to-coast and from border-to-border, the marvelous performance of Zerozone is the talk of the electric refrigeration industry.

Write us today for full information regarding this most comprehensive line.

## Zerozone

*Lifetime Refrigeration*

### IRON MOUNTAIN CO.

927 East 95th St., Chicago

**A Compressor For Every Need**

Zerozone Compressors cover every refrigeration requirement from the smallest to the largest. We can supply the exact model needed for any domestic use, be it Self-Contained Unit, Remote Installation or Multiple for Apartments, as well as a model for every Commercial need.

**A Complete Line**  
With 32 commercial and 19 domestic cooling units to choose from, Zerozone fulfills every mechanical and merchandising want in variety of styles and range of prices, yet maintaining a uniformity of design and construction that is particularly interesting to refrigeration engineers.



# Watch Copeland in 1929

The greatest year in Copeland's history is just completed—and a greater year is just ahead! Distributors and dealers looking for a *profitable* line of electric refrigeration are urged to consider Copeland's amazing increase in popularity and sales.

**S**HOWING A GAIN of approximately 50% the first ten months of this year over a similar period last year, Copeland sales very definitely establish the fact of a fast-growing nationwide preference for Copeland Dependable Electric Refrigeration.

Copeland's distributors and dealers have shared in the profitable results of this increased demand. More than that, they have firmly entrenched themselves in their respective communities and are now in position to take advantage of an even more profitable future.

## Copeland franchise extremely valuable

There are many reasons for the outstanding value of a Copeland franchise. Chief of these, of course, is the outstanding value of Copeland products and the *completeness* of the Copeland line—allowing the Copeland distributor or dealer to supply *all* requirements in the domestic, multiple and commercial fields.

## Dealer policy

The factory policy towards its distributing organization is also largely responsible for Copeland's great forward strides. Full and *rapid* sales cooperation; prompt deliveries of any desired models, *including the best sellers*; trade discounts that create an incentive toward volume busi-

ness; a sane understanding of the dealer's problem, and a willingness to help.

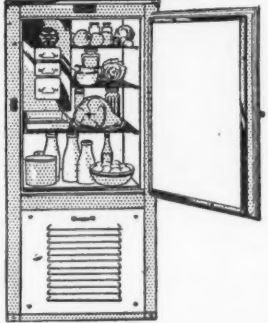
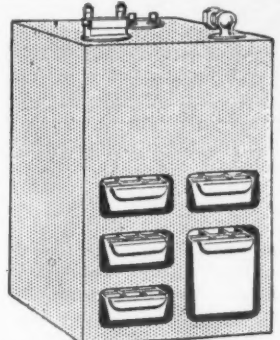
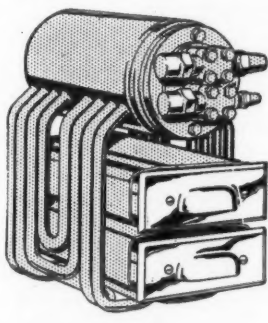
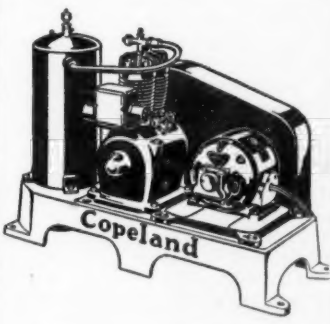
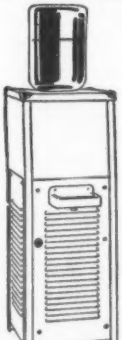
## Rare opportunities with Copeland

In the last four years Copeland has forged to the front. Copeland's growth has not been sensational or short-lived; it has been steady, consistent, *permanent*. Copeland's finances have been in able hands and Copeland's manufacturing facilities have increased in exact proportion to the increased demand for Copeland products. No over-expansion; no flag-waving or ballyhoo; no exploitation. Just sound, sane business methods that show a *profit*.

The Copeland distributing organization is not yet developed to a point desired by the management. There are rich territories still available. There are cities and towns where a well-established dealer could easily become a distributor. There are still opportunities for men of initiative to *make money with Copeland*.

## How about YOU?

We can't begin to tell you the entire Copeland story on this page. But if you are tired of *matching* dollars instead of *making* dollars write us and learn some amazing facts which foretell an era of unprecedented prosperity for Copeland and its entire distributing organization. You will be under no obligation, except to respect our confidences as we will respect yours.

	<p><b>3 Lines</b> of domestic electric refrigeration; \$195 to \$720 at factory; 5 to 20 cu. ft. storage capacity; 108 to 378 ice cubes; optional colors.</p>
<p><b>Separate Units</b> for present ice boxes in many different sizes and prices. Kitchen or "remote" installation. A profitable source of business.</p>	
	<p><b>Multiple</b> installations for apartments, flats, etc. Entire systems, including boxes. Attractive propositions for builders and owners.</p>
<p><b>Commercial</b> installations for stores, restaurants, fountains, clubs, etc. Utmost dependability; compact units; real economy. Factory counsel and help.</p>	
	<p><b>Water Coolers</b> for office, store, club, restaurant or factory. Cup or "hubbler" outlet; bottle or city supply. Single installation or multiple hook-up.</p>

COPELAND, 630 LYCASTE AVE., DETROIT, MICH.

# Copeland

**DEPENDABLE  
ELECTRIC  
REFRIGERATION**



## Philadelphia Electric Company Actively Promoting the Sale of Electric Refrigeration

Manager of Refrigeration Department Says Most  
Important Job Now Is Selling the Idea of  
the Need for Year Round Refrigeration

Address by A. L. MacMillan, manager, Refrigeration Department, Philadelphia Electric Co., at a meeting of the Philadelphia Section, American Society of Refrigerating Engineers, Engineers' Club of Philadelphia, October 30.

THE general opinion of a household electric refrigerator prior to 1925 held by the Philadelphia public, was that it was an old ice box with a motor attached. It would be a great source of revenue to the central station, and its only advantage to the householder was the elimination of the ice man.

The idea prevailed until the manufacturers and dealers began a very active publicity campaign, pointing out the many advantages, the sanitation, convenience and economy effected by using this modern household servant.

The electric refrigerator for household use was first introduced in Philadelphia twelve years ago. Kelvinator came to the Philadelphia market in the fall of 1915, and Isko was introduced in the spring of 1916. Both these companies were supplying units only, to be applied to householders' present ice boxes. These units were very high in price and due to salesmen's eagerness to make sales or from ignorance, many units were applied to ice boxes that would not hold satisfactory temperatures. These machines were in a more or less experimental stage and as a result, trouble developed that caused the householder and dealer considerable annoyance.

The dealers did not make money and the householder did not get the proper results. This experience made dealers skeptical about taking on a franchise for something that was going to be a source of trouble, so no great effort was made to sell them locally.

It was not until after the World War that interest was renewed in this subject, but then no great activities were employed to sell in large quantities. There were approximately twenty manufacturers of household electric refrigerators, prior to 1924, and they had very high priced machines to offer the public, a public that did not know the benefits of electric refrigeration.

The dealers realized that to merchandise the household electric refrigerator, it was necessary to train and keep available a corps of trained refrigeration mechanics that could make adjustments and repairs when breakdowns occurred. By the beginning of 1925, the mechanical features had been so far improved that the manufacturers could give the dealers assurance that, mechanically, the electric refrigerator was now ready to give the results demanded by the user. The dealers then began more actively to familiarize the Philadelphia public with the need of electric refrigeration in the home. Sales increased during this year and fairly good results were obtained by the user. However, prices were high and the public felt that it was still a luxury to be owned only by the wealthy class.

In 1926, more manufacturers were represented in Philadelphia, thus increasing local publicity and sales began to increase in volume. It was during 1926 that cabinet trouble developed and many of the dealers were faced with a very serious problem of replacing cabinets that developed door warpage and high heat leakage. This experience gave certain manufacturers a serious set-back in sales and hurt the local market when it became known to the public that electric refrigeration was still in the experimental stages, as they thought, due to this trouble. However, during 1926, there was approximately 400% increase in sales over 1925.

My own company, the Philadelphia Elec-

tric Company, began actively in 1926 to merchandise electric refrigerators. A sales force was organized and an appropriation was made in the advertising budget for electric refrigeration. Realizing the great load factor this labor saving domestic servant gave, we were anxious to do everything possible to have public acceptance of the electric refrigerator. In our publicity we pointed out the real benefits, particularly sanitation, that electric refrigeration gave the user and entered in the educational campaign along with the other dealers. This publicity brought very satisfactory sales.

By the first of January, 1927, we had an absorption of about 2.79% of the electric users in the city. This surely made Philadelphia a wonderful market for this type of merchandise in view of the fact that Philadelphia has more home owners than any other city.

1927 showed more electric refrigerators sold in Philadelphia than in all the preceding years combined and great public acceptance was shown. The millions of dollars spent by the manufacturers on national and local publicity was now beginning to show results and sales were most gratifying.

With the ushering in of the year 1928, we all looked for a banner year, which it is proving to be. Some of the manufacturers were oversold and deliveries were very uncertain during the peak demand in hot weather. This year's improvements and price reductions tended toward increased sales.

Our most serious problem is to get the message to the thinking public that good food preservation is just as necessary in the winter months as during hot weather. The sales slump during the winter months made us feel that this was seasonal merchandise and to keep up the public interest during this apparently off season, we preached the gospel of year around satisfaction, convenience and economy.

The Philadelphia Electric Company has established a rate for current, which is very economical and tends to increase the desire for equipping the home with any electric labor saving device. This rate of 8c per KWH for the first 12, 7c per KWH for the next 36 KWH'S and 3c per KWH for all current used above, or when a householder's bill reaches \$3.48 per mo. they automatically get this very low rate. Believing that the public did not realize just what they could buy when spending money for electricity, we have stepped into a publicity campaign which I believe will do more to increase the sale of electric refrigeration in Philadelphia than any other factor. I have brought with me copies of the type of advertising we are doing in this connection, and I believe you will agree with me that it is the right kind of publicity to help the refrigeration industry locally to bring the valleys out of the sales curve.

My company looks forward to a very

bright future in the increased load we will derive from the sale of electric refrigeration as it cannot help but increase tremendously with the impetus it now has.

### JOHNSTOWN REFRIGERATING CO. USES TWO FORMS TO SIMPLIFY ESTIMATING COMMERCIAL JOBS

The Johnstown Refrigerating Co., Johnstown, Pa., has designed two forms to help domestic refrigerator salesmen estimate commercial jobs where the size and shape of the boxes to be refrigerated, type of food to be preserved and similar details complicate matters.

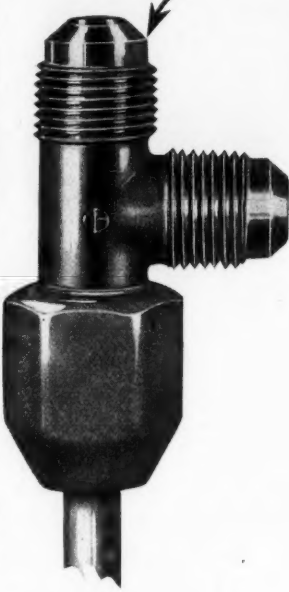
The salesmen merely fill in these forms, answering questions asked and return them to the office where an experienced estimator draws up a set of specifications for the particular job with prices. He also makes a comparison of the operating cost of the proposed installation with that of the system in use at the time of the estimate. The specification and quotation sheet are then returned to the prospect by the salesman.

The Johnstown Refrigerating Co. has a set of estimate sheets for every business in Johnstown, including hotels, restaurants and delicatessens which may be customers at some future date. These were obtained by canvassing soon after the company entered the refrigeration field and it is now only necessary to check up with the files in order to draw up complete specifications for any prospective commercial job.

### Ginger Ale Served From Esco Cooler at Hotel Men's Show

An Esco Milk Cooling cabinet, manufactured by Esco Cabinet Co., West Chester, Pa., was displayed by Copeland Refrigerator Co., of New York, at a Hotel Men's Show recently in New York. The cabinet was used to cool ginger ale.

## Here's Where Quality Counts!



Send a sample or blueprint for quotations on parts of a special nature. Catalogue No. R-30, showing our complete line of standard fittings, will be mailed on request.

THERE is a difference in the quality of tube fittings; and perhaps the most important point is the quality of the seating surfaces. Strength and accuracy of threads are important, too, in fittings which must meet the exacting requirements of the iceless refrigeration industry.

Commonwealth Refrigeration fittings are made exclusively from brass forgings and rod. That means compact grain structure and greater tensile strength. Each part is individually resealed, blown clean, and wrapped and handled separately in stock and transit.

The result is a quality fitting which insures an unbreakable connection—and one that will remain that way for years to come.

For seventeen years the Commonwealth Brass Corporation has specialized in the manufacture of quality brass tube fittings. A complete line of standard fittings is always in stock for immediate shipment.

Commonwealth Brass Corp.  
5781-5835 Commonwealth Ave.  
Detroit

## COMMONWEALTH FITTINGS BRASS



# Over 250,000 SATISFIED Users

"To the dealer in electrical refrigeration of any type, the prestige of McCray as a builder of fine cabinets has real profit value."

PIONEER in modern sanitary refrigerator construction, for 38 years McCray has held to an unyielding ideal of quality which is reflected in the remarkable service records of McCray installations.

McCray users have always been our best advertisements. This army of over 250,000 satisfied customers is striking evidence of that leadership which is further revealed in the fact that McCray is the world's largest manufacturer of refrigerators for all purposes.

In single stock units and complete built-to-order installations for the largest institution, McCray quality is held to this single high standard.

All McCray models may be used with electric or mechanical refrigeration of any type, or ice. Pure corkboard, sealed with hydrolene by a distinctive process, provides perfectly air-tight insulation.

Send for latest catalogs and further information about refrigerators to meet your specific need. No obligation, of course.

MCCRAY REFRIGERATOR SALES CORPORATION  
Dept. 66. Kendallville, Indiana

SALESROOMS IN ALL PRINCIPAL CITIES (See Telephone Directory)

## MCCRAY REFRIGERATORS

### Schmidt Counters Show Advantages of Adequate Display Facilities



Adequate and attractive display space is provided by the two Schmidt counters pictured above which were installed in the dairy products department of a market in Sandusky, Ohio, for Henry Hunt. Both counters have coils arranged along the rear, while the lower part of one is refrigerated and used as display case, with the coil compartment in the center.



## Complete the Job and Sell An Electric Refrigerator Advises Macon Supply Co.

**Numerous Contacts with Builders and a Systematic  
House-to-House Canvass Aided  
First Year's Success**

By Archie Richardson



**A**FTER selling a man the brick, the lumber, the roofing, the millwork, and the other things that go into the making of his new home, why not complete the job by selling him an electric refrigerator?"

That was the question the owners of the Macon Supply Company, of Macon, Ga., put to themselves last summer, and, finding many things in favor of the proposal and no serious ones against it, they launched into the new business. In a year it has reached the point where it requires the full time of five salesmen and its volume and profits bulk large against those of the old lines.

A decided advantage was found in the splendid display space already available, and the ability to use this to good advantage was one of the factors that led the company into electric refrigeration. The display room had been arranged to display built-in furniture, millwork, roofing and other things that go into the making of the home and was suggestive of a model home. The refrigerators fitted in as if the background had been made for them, and at the same time made the room look more complete and helped sell the things displayed in it.

This display has been the direct means of selling a number of refrigerators, for most of the people who visit it are building homes or planning to do so soon and are naturally interested in anything, particularly of a permanent nature, that will add to the convenience and attractiveness of the home.

The bulk of the selling, however, has been done outside the display room, for those who are building or who are figuring on building material and costs, represent but a portion of the refrigerator customers. Accordingly, a sales organization was formed and the young men went after business very much on the lines followed by automobile dealers.

This was in August of last year, but as deliveries were delayed at that time, the sales force was forced to spend most of the fall and winter months in preparatory work rather than in actual selling, and it was not until April of this year that the real selling campaign opened up.

### House-to-House Canvassing Yielded Most Sales.

House-to-house canvassing and the following-up of those found to be interested, has yielded the largest bulk of sales. The city was divided into five zones with a salesman in charge of each. He was expected to call at every home in his territory occupied by people believed likely to be able to afford to buy. He took a street and, starting at one end, called at every house until he had reached the end of the street or the limit of his zone. And when he got through with the street he knew just who was interested in electric refrigeration, and in addition had a store of other data that helped him in his later sales work.

No sales were made during these first winter calls, and to get orders was not the aim of the men when they started out, unless, of course, they should run into someone already sold on electric refrigeration and ready to give his order. But it put into the hands of the salesmen a vast store of information that was invaluable when the real selling campaign began in the spring.

The completion of this work found in the office a record of almost every family in the city who could be considered as an electric refrigerator prospect. Each man turned in a daily report showing whom he had called on and talked with during the day, the information he had obtained from and about each, and his opinion as to the likelihood of selling each person interviewed.

### No Territorial Restrictions on Salesmen

After the city had been covered in this way and real sales work was begun, territorial

restrictions were removed and each salesman was permitted to seek future prospects wherever he wished. Of course, each man made the greatest number of his sales in the sections in which he had worked, for it was in this territory that he had at the outstart a large number of prospects on whom to work.

A file of these was kept in the office and a daily report made by each man on whom of his prospects he had called during the day and the results of the interviews. If he were asked by a prospect to call back in, say, thirty days, or if he thought it worth while to do so, he reported this at the office, a notation was made of the fact, and he was reminded of the call on the day specified. This and other aids given by the office took as much of the detail work as possible off of the salesmen, leaving them free to devote all their time and energy to hunting up prospects and selling them refrigerators.

### Introductory Letters an Aid

An office aid that proved highly beneficial to salesmen was an idea that is believed to have been original here but which could be used to advantage anywhere, particularly by a concern whose officials or employees have wide circles of friends.

The salesmen starting out received letters of introduction to people on whom he wished to call, which assured his favorable reception and a better opportunity to tell his story. These letters were signed by members of the organization who were well acquainted with the prospects, and were written to fit each case.

A good prospect on whom a salesman called frequently received the next day a personal letter thanking him for giving the salesman opportunity to explain his proposition to him and expressing hope that he may soon join the happy family of electric refrigerator owners. If he had asked the salesman to call back in thirty days or mentioned that he would be interested when he moved into his new home, or something of the kind, the fact was mentioned in the letter and served as a reminder that the salesman would be back to see him at the time specified.

### No Form Letters

"These were all personal letters, written in our office and signed by myself or someone else in the organization," said J. B. Horton, in charge of electric refrigeration end of the business. "We use no form letters. Indeed, I have never been able to devise a form letter that would fit very many cases and there would be so much fill-in that it would be easier to write the whole thing as a personal letter. A personal letter is always more effective than a printed letter and the little more cost of getting it out is, in my opinion, well justified."

### Favors the Small Town

"We have recently had the opportunity of comparing the sales possibilities in a city and small town, for one of our salesmen who has formerly been working in Macon has been transferred to Fort Valley, a small town in an adjoining county. Appearances favor the small town as the better field for the electric refrigerator salesman."

It may be because the small town is virgin territory. The people know what electric refrigeration is and that it is thoroughly practical, and in many cases have not bought for the reason that no one has solicited them. The city, of course, has by no means been sold up to the limit; indeed,

the surface has scarcely been scratched as yet, but dealers have shown an inclination to neglect the small towns for the tremendous volume awaiting them in the larger centers of population.

"We are going to sell refrigerators all winter, and are counting on a good volume. The winter sales will not, of course, equal the summer sales, and we expect to have part of our sales force work heating equipment through the winter as a fill-in, then take up refrigerators again as next spring approaches."

"More and more the people are coming to realize that refrigeration is an all-the-year necessity, and each year is going to see more and more refrigerators sold during the winter months. In fact, we probably could employ our entire sales force profitably through the season if we had both commercial units and domestic equipment to offer. But even as it is, we will keep part of our sales force as busy on refrigerators through the winter as they have been through the summer."

### Elin Appliance Co. Newark, N. J. Gets Fourth Carload in Month

The fourth carload of Zerozone refrigeration equipment to go forward within the month, was scheduled to leave the Zerozone factory for the Elin Appliance Co. of Newark, N. J. during the week of Sept. 17. Three complete carloads had been shipped during the first part of the month, according to the Iron Mountain Co., manufacturers.

These carloads were comprised of multiple equipment and averaged about 55 cabinets and coils and three or four compressors to the car.

### G. S. Bataille Joins Hussmann

G. S. Bataille, formerly with the Kelvinator Corp. as application engineer, is now with the Harry L. Hussmann Refrigerator Co., St. Louis, Mo., as sales engineer, giving special attention to air circulation.

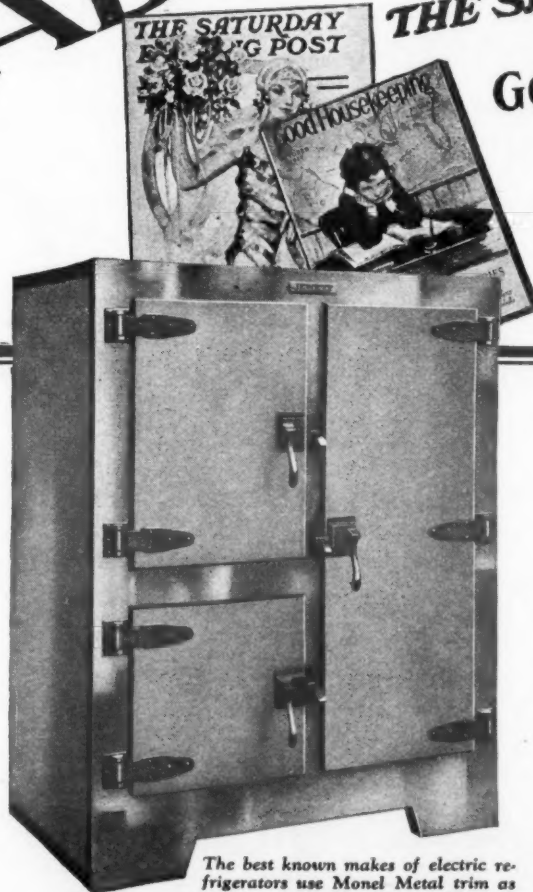
AMERICA'S MOST BEAUTIFUL REFRIGERATOR



MODEL G-1

Rhinelander Airtite Refrigerators are built to accommodate any Standard Electric Unit. These cabinets sell easily because they combine correct construction with rare beauty. Write for prices and information on how you can increase your sales and profits by handling Rhinelander Airtites. Rhinelander Refrigerator Co., Rhinelander, Wis.

## COLOR ADVERTISING in THE SATURDAY EVENING POST Good Housekeeping



The best known makes of electric refrigerators use Monel Metal trim as an important selling feature. Through national advertising the public is being taught that "quality trim denotes quality throughout."

## MAKING IT STILL EASIER TO SELL MONEL METAL TRIMMED REFRIGERATORS

Monel Metal trim is already established as a quality feature on many leading makes of refrigerators.

With the advent of the new color advertising in The Saturday Evening Post and Good Housekeeping—impressive advertising reaching millions of refrigerator buyers—Monel Metal trim will become an increasingly important talking point.

National advertising is the mother of national prestige. The prestige that is born of Monel Metal national advertising will lend a helping hand to those refrigerator manufacturers who take advantage of Monel Metal's silvery good looks, its cleanability, its rare wearing qualities, and use it as trim on their quality products.

The modern kitchen is a Monel Metal kitchen. You can cash in on the trend toward Monel Metal by featuring the Monel Metal trim on your product.

SEND FOR DETAILS OF MONEL METAL ADVERTISING PLANS

Monel Metal is a technically controlled Nickel-Copper alloy of high Nickel content. It is mined, smelted, refined, rolled and marketed solely by The International Nickel Company. The name "Monel Metal" is a registered trade mark.

# MONEL METAL

THE INTERNATIONAL NICKEL COMPANY (INC.)



67 WALL STREET, NEW YORK, N. Y.



## FIRE UNDERWRITERS ISSUE CODE RULES FOR MULTIPLE JOBS

(Concluded from Page 1, Col. 1)

posted on the premises where the system is installed. Tests shall include a vacuum test of the complete piping system, preferably with the evaporators installed, but valves thereon may be closed to prevent withdrawal of the refrigerant; under this test a vacuum of 20 inches of mercury shall be placed upon the system and shall be held for a period of 20 minutes, with no detectable drop, after the pump has been stopped.

(c) After the vacuum test, the system of piping shall be tested by application of pressure as indicated in the table below:

Refrigerant Used	Test Pressures	
	High Side Part Lbs. per sq. in.	Low Side Part Lbs. per sq. in.
Carbon dioxide	1,500	750
Ammonia	300	150
Methyl chloride	180	80
Sulphur dioxide	135	50
Isobutane	130	50
Butane	75	35
Ethyl chloride	50	25
Methylene chloride	15	15

Note: It is suggested that test pressures be imposed by the use of carbon dioxide or nitrogen.

### 4. Capacity Limitation.

(a) No multiple system shall contain more than 100 pounds of refrigerant.

(b) Compressors shall not be located under stairways or near dumb waiter or elevator shafts; shall be located as nearly beneath the riser as practicable; shall preferably not be in a room containing storage of combustible material; shall in any case be located at least 10 feet from such storage; shall be located in an accessible part of the building with adequate lighting facility provided, and shall be protected against mechanical injury by a non-combustible partition, or by heavy metal netting secured to two by four-inch wooden studding or to metal posts.

### 5. Refrigerant Lines.

Refrigerant lines shall be installed in accordance with either of the following methods:

(a) Standard pipe for refrigerants requiring test pressures of 300 pounds or less, and extra heavy pipe for test pressures in excess of this figure.

(b) Approved annealed seamless copper tubing of not less than .034 inch wall thickness for diameters not exceeding five-eighths, and of corresponding greater wall thickness for larger diameters. Where this method is employed tubing shall be protected from mechanical injury as follows:

From the manifolds at the compressor tubing shall be installed in iron or steel pipe or other metal enclosures as specified below, with suitable metal boxes for the manifold and for all other valves except those at the evaporator. Flexible metal enclosures may be used at bends or at terminals if not exceeding 6 feet in length and rigidly fastened to connecting pipe and/or valve boxes. Each run of pipe shall be sealed or plugged at each junction box inlet with a material not affected by moisture or the temperature of the line. Enclosures shall be rigidly secured to the walls or other support. Tubing shall be independently supported in such a manner as to prevent excessive vibration and strains at joints and connections. Valves service connections and joints in tubing shall be rigidly secured in suitable metal boxes at accessible points.

### 6. Joints.

(a) Pipe joints shall have a standard pipe thread and shall be made up with materials suited to the refrigerant employed.

(b) If flanged fittings are used for pipe connections they shall be of recessed gasket type.

(c) All joints in copper tubing shall be of sweated types, except that flared joints may be used for tubing not more than five-eighths inch in diameter and where the required test pressure does not exceed 180 pounds.

(d) All joints in tubing shall be accessible.

### 7. Valves and Fittings.

(a) All valves and fittings on the high pressure side of the system shall be of the forged type; or castings of semi-steel may be used.

(b) Shut-off valves shall be installed at the following locations. At each service outlet in pressure and return lines, and in each riser or manifold connection at or near the compressor. These valves shall be fitted with a hand wheel or other means of ready operation as an integral part thereof.

(c) Valves in service connections shall be located outside of refrigerating unit and at such distance above the floor as will provide ready accessibility.

(d) Shut-off valves shall be installed in both connections to every evaporator in such a manner as to permit the removal of the evaporator with valves attached.

### 8. Service Connections.

(a) Not more than a single tenant shall be supplied from an outlet box on a main riser. Such outlet box shall be located

## Portland Sandwich Shop Features Its Refrigeration Equipment



Seven pieces of equipment, cooled by Frigidaire, were installed by the Portland, Ore., sales branch of the Frigidaire Corporation, recently when the Top Notch Sandwich Shop in Portland was enlarged.

Although W. P. Yaw, owner, was a novice in the restaurant business two years ago, when he started the Top Notch, which has proved to be a most successful eating place, he was not long in recognizing the value of electric refrigeration in caring for his foodstuffs. He considers the display card "Frigidaire safeguards the food you buy here," adequate assurance to his customers that their food will be fresh when served to them.

Before the end of Mr. Yaw's first year in business, the salt and ice fountain, with which he started, had been replaced with a fine Frigidaire installation, a Liquid Carbonic fountain with a capacity of thirty gallons. The back bar was refrigerated with an 83F coil.

Mr. Yaw has two water coolers, a No. 4 and a No. 6. The No. 4 is used as it was intended to be for a water cooler, but the No. 6 is put to the more novel task of cooling tea for iced tea.

Two large refrigerators were installed, one for reserve stock, and one, with glass fronts, for the display of foods. Both are equipped with 18F coils.

Mr. Yaw considers his salad table one of the most useful pieces of equipment in his establishment. He had long felt the need for such a table before he found a space that he could spare for the purpose. One-half of the top of the table, which has openings for the salad containers, is in the utility room. The other half extends into that part of the shop which is just behind the counter where the hamburger for sandwiches is fried, being utilized as a cupboard for holding the meat. Both the bottom and top are refrigerated from an 83F coil.

within the premises of the tenant served and so arranged as to be accessible at all times.

(b) No outlet or junction box shall be permitted in any hallway, stairway or vertical shaft not cut off at each story. Elevator, dumbwaiter or other shafts, containing moving objects shall not be used for outlet or junction boxes, nor for tubing or piping carrying refrigerant.

(c) Every refrigerator shall be rigidly secured in place.

### 9. Safety Features.

(a) Each compressor drive shall be provided with a device which will automatically stop the compressor at a pressure not in excess of the test pressure as specified by Section 3. This shall not apply to air-cooled machines, not to water-cooled machines having a liquid receiver capacity of less than 12 pounds of refrigerant and which are so designed as not to permit a pressure in excess of the test pressure.

(b) Where ammonia or carbon dioxide are used every high pressure side or liquid receiver which can be shut off shall be equipped with a pressure relief device discharging into the low pressure side of the system or to the outside of the building. Where the relief from the high pressure side is into the low pressure side the latter shall be protected by a relief device discharging to the outside of the building or to a suitable absorber.

(c) Refrigerant piping or enclosure carrying refrigerant lines shall be conspicuously marked or labelled so as to plainly indicate its contents.

### 10. Instructions.

(a) Printed instructions covering the operation and maintenance of the system and what to do in emergencies shall be permanently posted at riser control valves.

(b) It is recommended that such instructions include a diagrammatic sketch of the system with the parts labelled for reference.

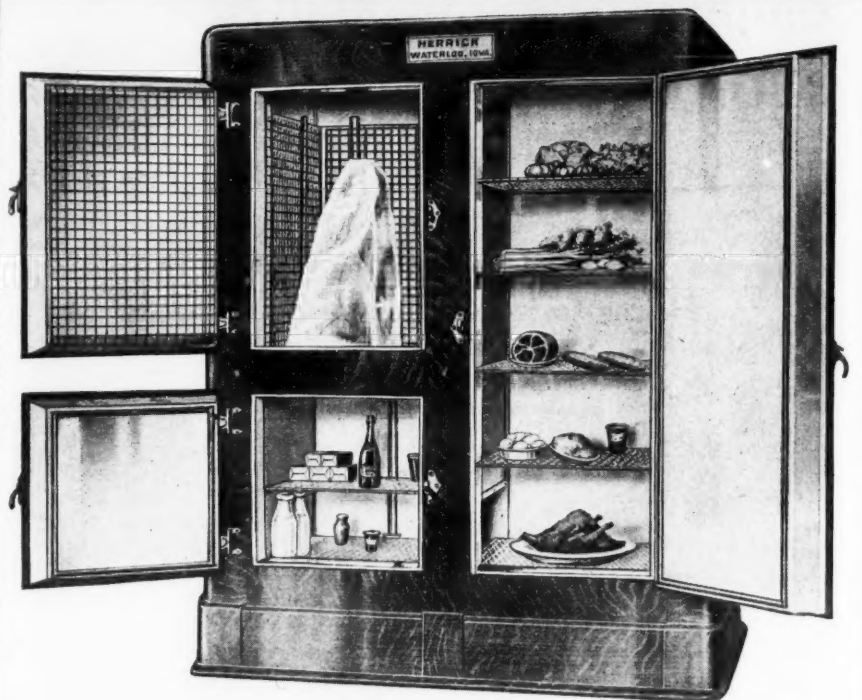
"Note—The List of Inspected Gas, Oil, and Miscellaneous Appliances issued by the Underwriters' Laboratories contains a list of manufacturers of various systems, devices, materials or fittings that have been examined and tested by the Underwriters' Laboratories and have been found to comply with the standards for such devices, materials or fittings."

### T. H. Tanger With Servel Engineering Department

T. H. Tanger, formerly in the engineering department of Kelvinator Corp., Detroit, has recently joined the same department of Servel, Inc., at Evansville, Ind.

### To Offer New Magazine to Ice Manufacturers

Ice Merchandising is the name of a new publication to be issued beginning in January, 1929, by Nickerson & Collins Co., Chicago, publishers of *Ice and Refrigeration*.



## Distinctive Cabinets

for Electric Refrigeration

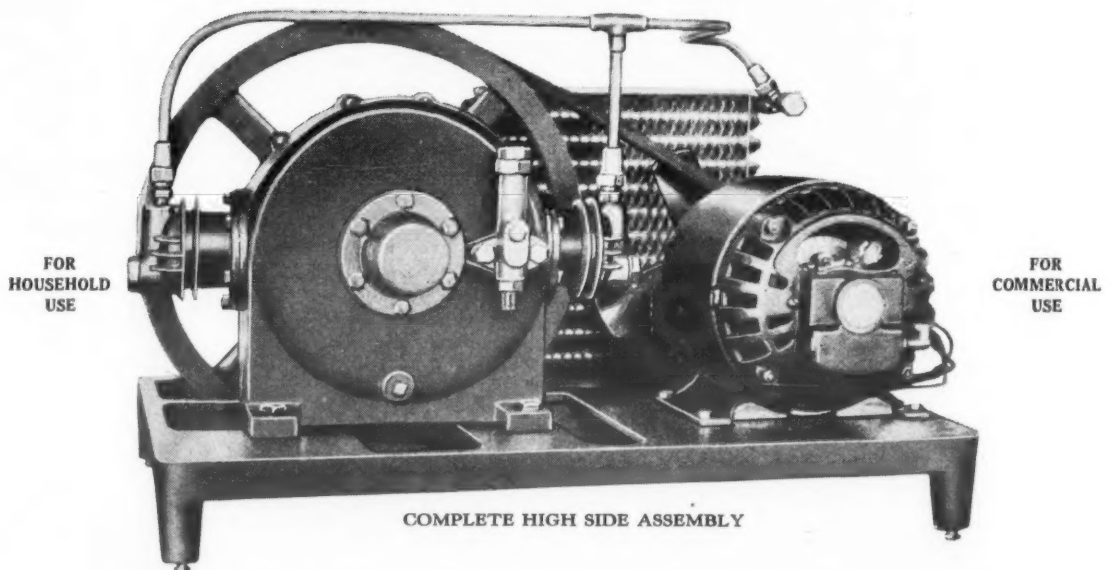
## Herrick Refrigerator Co.

1019 Commercial -- Waterloo, Iowa

## MANUFACTURERS LARGE CONSUMERS DISTRIBUTORS

WE NOW OFFER TO YOU THE

## ICELECT<sup>REFRIGERATION</sup> COMPRESSOR UNIT



THE ICELECT Refrigerator Compressor has created a deep interest among refrigeration engineers, because of its remarkable simplicity, ruggedness, efficiency and quietness. A common expression from engineers, "the cleverest piston movement I have ever seen."

In ICELECT Compressors we have excluded the crankshaft and connecting rods. The two pistons are cast into one piece, driven by one eccentric (not a Scotts yoke). One piston serves as a guide for the other.

Oil is forced to all bearings and moving parts under pressure, furnished by a built-in gear pump. The seal! It's new too, and absolutely tight.

The valves are of the poppet type with a hollow stem, this construction gives us the wonderful tightness of the commonly used poppet valve, and the lightness necessary for quiet operation.

Send for our booklet "The Heart of Refrigeration" it contains a detailed description.

**ICELECT<sup>REFRIGERATION</sup> CORPORATION**  
ELECTRIC REFRIGERATOR MANUFACTURERS  
ELEVENTH AND HARNEY STREETS  
OMAHA, NEBRASKA



# "SPARKLET AERATION"

*The ice cream feature that's going like wild-fire from coast to coast*

GENERAL ELECTRIC . . . Kelvinator . . . Servel . . . Good House-keeping Institute . . . Copeland . . . Electrolux . . . Welsbach—every one of them and many others have endorsed SPARKLET AERATION.

Dealers from Canada to Mexico say that the SPARKLET AERATION method of making delicious ice cream in mechanical refrigerators is helping them make more refrigerator sales.

Every dealer should know every fact about this simple, easy way to make velvet-smooth ice cream or sherbet without fuss, muss or stirring, and without crystallization. Let us show you what other refrigerator dealers are doing to boost their sales with Sparklets . . . and are making a profit on Sparklet Syphons and Bulbs at the same time.

*The Sparklet "BLUE BOOK" for dealers is ready for the press. Have us reserve your copy . . . there may not be enough to go 'round! Write us on your letterhead today.*

Other prominent refrigerator distributors who are also Sparklet distributors:

Kelvinator of Canada, Ltd., London, Canada	Bard & Barger Columbus, Ohio	Glueck & Company Kansas City, Mo.
Electric Refrigerator Co. Minneapolis, Minn.	Lockwood Embree Sales Corp., Roanoke, Va.	A. G. Riddick, Inc. Jackson, Miss.
Philip H. Harrison & Co. Newark, N. J.	Lake States C. E. Supply Co., Toledo, Ohio	Eastern Service Co. Boston, Mass.
Erco, Inc. Buffalo, N. Y.	Maine Electric Company Portland, Me.	Wheeler Refrig. Co. Rochester, N. Y.

**SPARKLETS, Inc.**  
19 W. 44th Street  
New York

CONSOLIDATED GAS CO. OF NEW YORK, SERVEL AND ELECTROLUX distributors, say—"We expect to sell more refrigerators through the use of Sparklets."

NEW YORK POWER & LIGHT CO. OF ALBANY, NEW YORK, General Electric distributors, say—"SPARKLET AERATION is the only really successful method yet found for making delicious ice cream in a mechanical refrigerator."

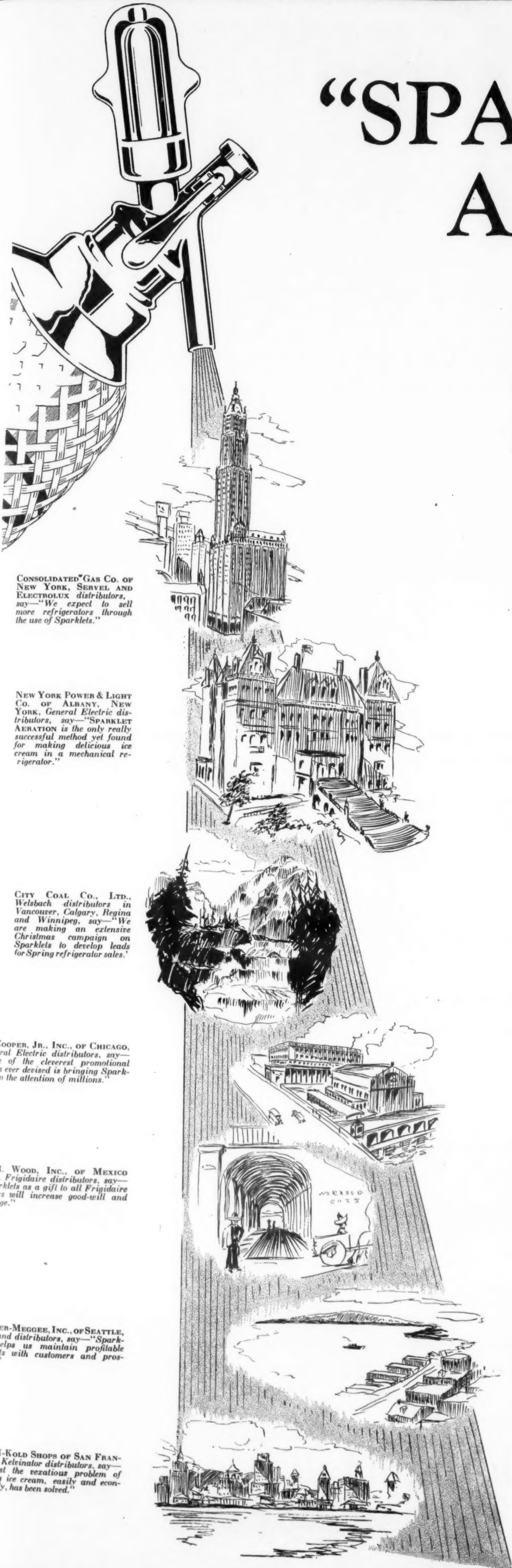
CITY COAL CO., LTD., Welsbach distributors in Vancouver, Calgary, Regina and Winnipeg, say—"We are making an extensive Christmas campaign on Sparklets to develop leads for Spring refrigerator sales."

R. COOPER, JR., INC., OF CHICAGO, General Electric distributors, say—"One of the cleverest promotional plans ever devised is bringing Sparklets to the attention of millions."

L. R. WOOD, INC., OF MEXICO CITY, Frigidaire distributors, say—"Sparklets as a gift to all Frigidaire owners will increase good-will and prestige."

HARPER-MEGGEE, INC., OF SEATTLE, Copeland distributors, say—"Sparklets helps us maintain profitable contacts with customers and prospects."

HOT-N-KOLD SHOPS OF SAN FRANCISCO, Kelvinator distributors, say—"At last the vexatious problem of making ice cream, easily and economically, has been solved."





## AUSTRALIAN CLIMATE STRENGTHENS APPEAL OF REFRIGERATION

By Vice Consul Walter T. Costello

The demand for electrical household refrigerators in Australia is gradually increasing, but the education of users to their utility is a slow and expensive process. Even before the popular introduction of electric refrigerators, ice chests were not in general usage, and it was and still is the common practice not to buy ice in winter. Many apartment houses recently constructed or in the course of construction are installing electric refrigerators, however, as an inducement to prospective tenants, and probably this will have some influence in prompting other apartment-building owners to install similar equipment.

### Market Possibilities

Australia offers great possibilities for the sale of refrigerators, both in city and country districts. The summer in Australia is semitropical and in northern New South Wales and Queensland the climate is warm during the greater part of the year.

Ice and refrigeration are principally required for food preservation and cooling drinks. In country districts of large ranches mutton is the staple food, and naturally some method of refrigeration is required.

In Sydney the prevailing retail price of ice is comparatively high—about \$0.87 per 100 pounds—while in country districts it is more expensive—\$1.35 to \$1.80 per 100 pounds.

Many of the farmers in country districts, where electricity is not installed by the municipality, possess small house-lighting plants. Electric power costs slightly less than 3½ cents per kilowatt-hour in Sydney, while it is more expensive in the country.

### Marketing Practice—Terms and Prices

Refrigerators are marketed generally through large firms having the necessary capital to stock substantial quantities and display them in suitable premises. The distributor is usually the exclusive agent for an entire State and appoints subagents in country centers, and this appears to be the most desirable method to adopt in selling refrigerators in this territory.

Importers and distributors are usually required to pay cash against documents at Australian ports of arrival, and this seems to be a satisfactory method of settlement.

The retail prices of imported refrigerators are necessarily high, owing to the heavy import duty, substantial freight charges, and selling commissions. Duty, freight, insurance, customs clearing, and other charges add 75 per cent to the invoice cost to land an American refrigerator in a distributor's store in Sydney. Thus an American refrigerator, invoiced at \$250, landed at Sydney costs about \$437.50. After provision for distributor's overhead and profit, refrigerators become really expensive possessions. The two most popular imported makes at present are being sold at \$413.65 to \$535.30. Doubtless high prices have tended to restrict sales more than any other factor. Twenty-six—295—Refrig. News

### Installment Buying

Distributors are now concentrating their sales efforts on the homes and apartments houses of the larger cities. Terms are offered to purchasers, and in the marketing of the lower-priced refrigerators an initial payment of about \$50 is required, with the balance spread equally over a period of 12 monthly payments.

Although imports of refrigerators are not classified separately, the greater number of electric household refrigerators in use in Australia are of American manufacture; two well-known American makes are most in demand, and several others are sold. The British Electrolux is on the market, and two refrigerators are manufactured locally, the Electric and the Victor, but the competition from them is limited, as they are still in the experimental stage.

The policy of the Commonwealth customs tariff is protective, and heavy import duties are assessed, even where local industry is unimportant. Refrigerators of British manufacture are dutiable at the rate of 45 per cent ad valorem, while all other foreign makes are assessed at 60 per cent ad valorem, which actually amounts to a flat rate of about 50 per cent and 66 per cent, respectively, of the invoice price.

### Future Prospects

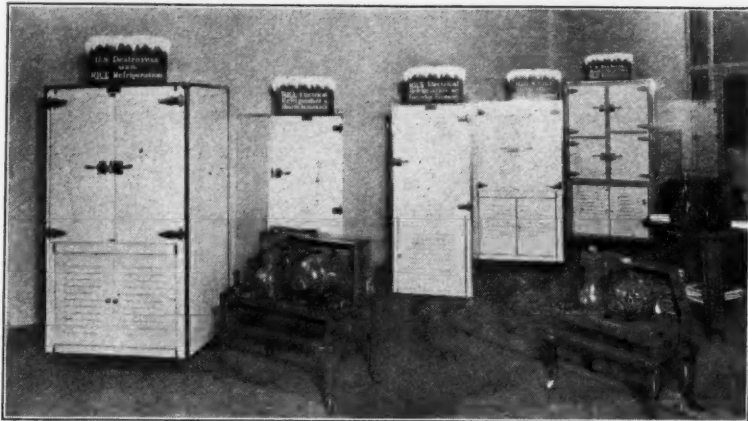
Electric refrigerators are imported complete at present. Since the customs tariff is high, however, it is probable that in the near future distributors will arrange for the local manufacture of all cabinetwork in order to avoid a portion of the duty and enable a reduction in retail prices, which would increase the possible volume, since prevailing high prices restrict sales to users of greater than average income.

### Doctor Uses Portable Refrigerator

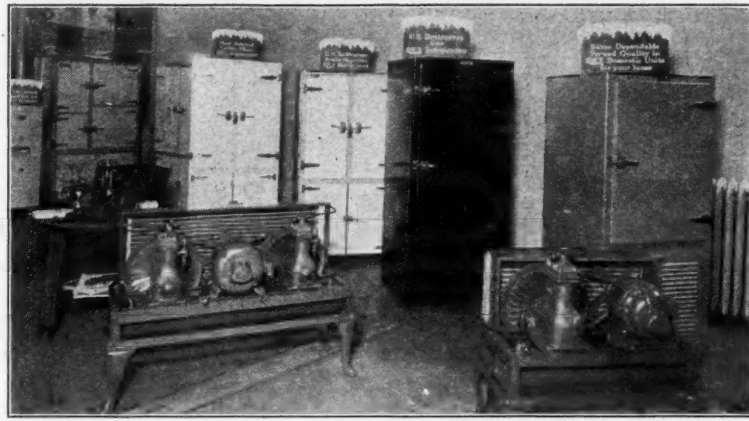
A special General Electric refrigerator mounted on a carriage with rubber tired wheels was purchased for use in the office of Dr. J. Bank, of Taylorsville, Ill.

The doctor uses it to keep serums and certain instruments and has found it very convenient on account of its portability.

## Rice Distributor Plans Formal Opening of Detroit Showroom Dec. 1.



Commercial and domestic equipment and water coolers are on display in the new showroom of Rice-Tuck Refrigeration, Inc., 4452 Cass Ave., Detroit, distributors for Rice electric refrigeration in Michigan which was opened on Oct. 15 and for which a formal opening is planned about Dec. 1.



The display of domestic cabinets includes several colored models, which according to O. C. Richardot, manager are kept in the display room principally because of the colorful touch added. Mr. Richardot was formerly with the Norge-Detroit Sales Co., and previous to that with Absopure and Kelvinator.

## DECORATIVE DESIGN IN HARDWARE ADDS TO SALES APPEAL

Chromium Finish Gives Lasting Beauty to Metal Parts

THE new demand for decorative refrigerator hardware is one of the most significant tendencies in the whole field of modern refrigerator design, believes James L. Murray, president of the Grand Rapids Brass Co.

"We are becoming a nation of apartments and small homes," he says, "and the kitchen is again taking its place as one of the important living rooms in the average family of comfortable circumstances. It is only a short step from attractive window hangings and decorated breakfast sets to the bright, cheerful refrigerator exterior."

"This does not mean that the refrigerator manufacturer must adopt specially designed hardware. Fortunately, many of the regular commercial patterns are very graceful in the simplicity of their outline. But it is true that decorative hardware adds a very marked appeal to a good refrigerator, such that its added expense can often be written off against lowered sales cost."

"It is interesting, however, to realize what a good artist-designer can do with the stereotyped hardware models. Our 'deluxe' patterns are built entirely around hinge and latch mechanisms that have proved positive, sturdy and satisfactory in the commercial field. A re-shaping of the handle, a decorative border for the edges of the housing and strike—these are all that need to be done to convert a good, substantial catch into a thing of beauty."

"Finish, of course, is important. Plain, heavy nickel plate gives a good effect when new. Satin silver nickel, because of its richness, seems to be the preferred finish for these decorative fittings, however."

### Chromium Does Not Tarnish

"But the extraordinary qualities of genuine chromium plate offer the solution for the manufacturer who desires the very finest equipment that can be made. This remarkable metal is becoming well-known through its adoption by many automobile makers for radiators, lamps and other exposed metal surfaces. Chromium is hard—a file will scarcely touch it. And it is absolutely proof against tarnish and corrosion. The finest nickel, in time, will become grimy, and can regain its original polish only by the use of abrasives. Chromium plate, on the other hand, holds its clean, blue-white brightness forever. A hasty rub from a cloth will remove every trace of surface grime. Like nickel, chrome takes a satin surface when properly handled, and this effect is the closest approach to the permanent beauty of silver and platinum that has been developed in the whole field of metallurgy."

"Only the difficulty of handling the metal has been responsible for its slow adoption. Within the past few years the process has been perfected so that perfect results can be assured. During the past year we have been using it regularly, whenever specified, and the results have been uniformly good."

## NEW YORK SALESMAN LANDS AN ORDER FOR NEARLY \$100,000

G. P. Robinson, salesman for Rex Cole, Inc., General Electric refrigerator distributor in New York, N. Y., recently closed an order for 356 units, totaling \$99,096. He sold 60 P-42's, 103 R-52's, 163 RT-72's and 30 RL-95's to Earle and Calhoun, who plan to install them in eleven New York apartment buildings.

In addition to closing the large order, Mr. Robinson is the first General Electric refrigerator salesman to fly to the North Pole and return in the "On the Top of the World" airplane contest being conducted by the General Electric Co., Sept. 15 to Dec. 31. His order enabled him to make the mythical journey without a stop.

## Fresno Theatre Gets Refrigeration From Ice Cream Plant

STOWED away in the basement under the stage of the new Wilson Theatre of Fresno, Calif., is a system of refrigerating pipes, and conduit, air washers, fans and pumps that ventilate and cool the theatre.

The Wilson electrically operated ventilating equipment is capable of lowering the temperature of the air 40 degrees below the outside temperature if such an extreme is necessary. The refrigerating system is supplied with ammonia gas by a pipe line from the Benham Ice Cream Refrigerating plant 500 feet away.

When the temperature on the street

soars to 110 degrees it is possible to make the air in the theatre 70 degrees. But such extremes are not advisable and during hot weather the management aims to maintain a temperature of about 10 degrees below outside conditions. An average of 75 to 78 is regarded by physicians as most healthful and really is the most comfortable. The ventilating and cooling system effects a complete change of air every 20 minutes.

While imitation rain, snow, hail, thunder and lightning for many years have given realism to stage productions, it is only during the past few years that the

comfort of the audience has been given serious consideration. Heating systems of course, always have been considered necessary but the cleansing and cooling of the air in the theatre is a comparatively new idea that is becoming more general as new theatres are built.

## Evansville Kelvinator Distributor Appoints 3 New Dealers

The Evansville Planing Mill Co., Evansville, Ind., recently appointed distributor for Kelvinator in southern Indiana and Illinois and western Kentucky, has appointed the following dealers, Seitz Electric Co., Evansville, Ind.; Sudduth Electric Co., Washington, Ind.; Jasper Machine Works, Jasper, Ind.

**FINE** steel and All-Porcelain cabinets built in large quantities for Electric Refrigeration Manufacturers.

**COMPLETE** line of commercial refrigerators for electric refrigeration distributors and dealers.

**COMPLETE** line of porcelain display cases especially designed for electric refrigeration.

**WALK-IN** coolers for electric refrigeration.

**ALL-STEEL** and All-Porcelain cabinets for remote installation.



Our electric refrigeration cabinet plant is the largest in the world devoted exclusively to the manufacture of cabinets for manufacturers of electric refrigeration equipment.

# Belding Hall Company

Belding, Michigan



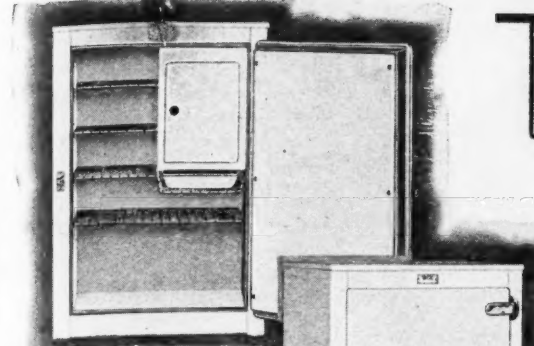
# THIS LINE OF CABINETS WILL MAKE INTERESTING HISTORY IN 1929

**R**EX again surpasses in Cabinets with advanced style motifs in a complete line of ten Residence and ten Apartment-Home Models—the unmistakable creations of master cabinet designing, engineering and craftsmanship.

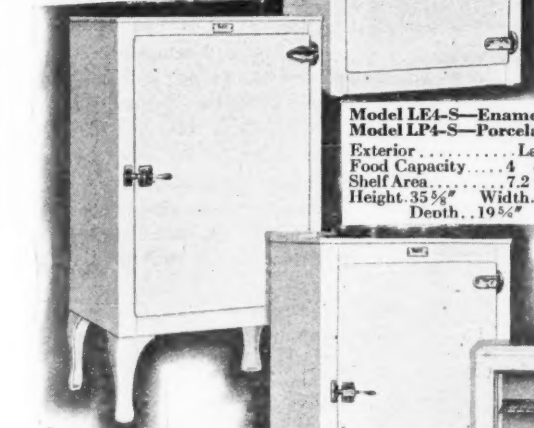
**S**EE HOW REX has improved upon the latest trends in modern cabinet construction. Notice the well proportioned lines—the smartness of the new hardware—the glistening beauty of lacquer, enamel and porcelain finishes. See how thoroughly REX has met the even more modern requirements in the spacing of the shelves and the interior appointments. Learn how these Cabinets insure further economies in the operation of the standard refrigerating units.

**C**OUNT the number of advanced features of this new Line of Cabinets—they are readily seen in every one of the 20 standard models—being the complete line backed by a thirty-year reputation of fair dealings that give the manufacturer and dealer the visible cabinet beauty and built-in quality which are the dominant influences in the selection of today's most popular mechanical refrigerators.

**Y**OUR COPY of the new leaflet illustrating and describing the complete 1929 Line is ready for mailing. May we send it?

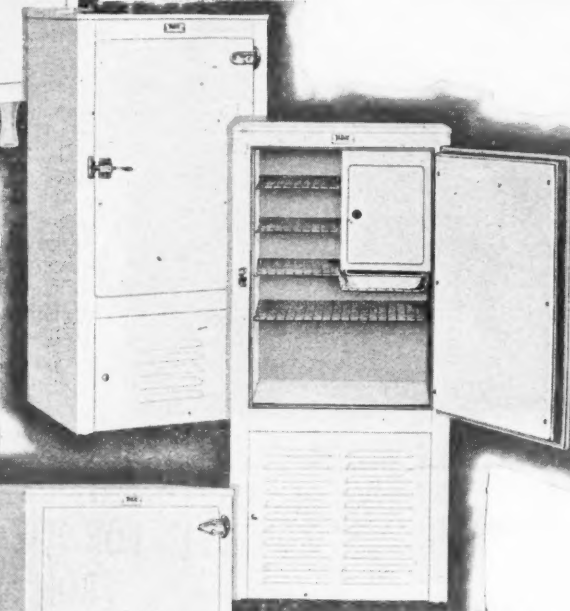


Model LE45-S—Enamel Int.  
Model LP45-S—Porcelain Int.  
Exterior..... Lacquer  
Food Capacity..... 4.5 cu. ft.  
Shelf Area..... 8.1 sq. ft.  
Height..... 36 1/2" Width..... 26 1/4"  
Depth..... 20 3/8"



Models LE4-S and LP4-S  
with legs attached.  
For remote installation of  
compressor.

Model LE4—Enamel Int.  
Model LP4—Porcelain Int.  
Exterior..... Lacquer  
Food Capacity..... 4 cu. ft.  
Shelf Area..... 7.2 sq. ft.  
Height..... 49" Width..... 23 3/4"  
Depth..... 19 3/8"



Model LE45—Enamel Interior  
Model LP45—Porcelain Interior  
Exterior..... Lacquer  
Food Capacity..... 4.5 cu. ft.  
Shelf Area..... 8.1 sq. ft.  
Height..... 57 1/2" Width..... 26 1/4"  
Depth..... 20 3/8"

Model LE50—Enamel Interior  
Model LP50—Porcelain Interior  
Exterior..... Lacquer  
Food Capacity..... 5 cu. ft.  
Shelf Area..... 9 sq. ft.  
Height..... 57 1/2" Width..... 26 1/4"  
Depth..... 22 1/4"

Model LP55—Lacquer Exterior  
Model P55—Porcelain Exterior  
Interior..... Porcelain  
Food Capacity..... 5.5 cu. ft.  
Shelf Area..... 9.2 sq. ft.  
Height..... 58 1/2" Width..... 32"  
Depth..... 20 3/4"

Model LP7—Lacquer Exterior  
Model P7—Porcelain Exterior  
Interior..... Porcelain  
Food Capacity..... 7 cu. ft.  
Shelf Area..... 11.1 sq. ft.  
Height..... 63 1/2" Width..... 35 1/4"  
Depth..... 22 3/8"

Model LP12—Lacquer Exterior  
Model P12—Porcelain Exterior  
Interior..... Porcelain  
Food Capacity..... 12 cu. ft.  
Shelf Area..... 19 sq. ft.  
Height..... 71" Width..... 45 1/4"  
Depth..... 23 1/4"

Model LP9—Lacquer Exterior  
Model P9—Porcelain Exterior  
Interior..... Porcelain  
Food Capacity..... 9 cu. ft.  
Shelf Area..... 13 sq. ft.  
Height..... 70 3/4" Width..... 35 1/4"  
Depth..... 22 3/8"

Model LP15—Lacquer Exterior  
Model P15—Porcelain Exterior  
Interior..... Porcelain  
Food Capacity..... 15 cu. ft.  
Shelf Area..... 24.6 sq. ft.  
Height..... 71" Width..... 53 1/4" Depth..... 23 1/4"



# REX MANUFACTURING CO.

CONNERSVILLE, INDIANA, U. S. A.



# ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Refrigeration Industry

PUBLISHED EVERY TWO WEEKS BY

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NOVEMBER 21, 1928

## Refrigerator Quality

IT is to the credit of the ice industry that it is now making a serious and organized effort to promote public appreciation of quality refrigerators. Time was, not so long ago, when the ice company executives were notably indifferent to the public interest in this respect. Apparently they figured that wasteful habits on the part of the customer merely served to increase their own volume of business.

The sudden popularity of the electric refrigerator is admittedly responsible for the change of attitude. In the national advertising now being presented through the National Association of Ice Industries, credit is freely given to mechanical refrigeration for bringing out the awakening of the ice industry to its responsibilities and opportunities.

When electric refrigeration appeared upon the scene in a big way a few years ago, manufacturers of refrigerators hailed it as the savior of their industry. Keen competition had brought about a continual reduction in quality until the makers of ice boxes were lamenting that no one seemed to know or care how the refrigerator was made. Cut-price sales by department stores had become so common that price, and extremely low price, was the dominant factor in the business. With the advent of electric refrigeration and its requirement for a better quality of materials and construction, new hope was given to the industry.

The optimism regarding the cabinet situation was soon followed however, by a series of difficulties—defects which showed up after the product had been in use by the customer for several weeks or months. A good share of the troubles were doubtless due to improper design and construction on the part of companies which undertook to build cabinets without previous experience and with little or no knowledge of refrigeration. Even the concerns with long and successful experience in building ice boxes found that the conditions to be met in electric refrigeration were far more rigorous than any which they had previously confronted. While some of the manufacturers were practically forced to learn the business all over again the net result has been a tremendous improvement. A product of real quality has been developed and the leading manufacturers are more than anxious to put their new-found knowledge to broader use.

The complaint is now being made that the manufacturers of machines, with their distributors and dealers, have become so obsessed with the idea of price reductions that quality is again being driven out of the cabinet. In other words, the new standard of quality was no more than set up than new forces of competition started to work to tear it down again. It is to be hoped that the electric refrigeration industry will not lose sight of the progress which has been made or allow the standard of quality to be lowered.

To the uninitiated, the cabinet appears to be an inert thing with practically nothing about it to go wrong. There is a consciousness that the machine is moving and working, with parts which may wear or break. Little thought is given to the unseen forces, arising from the great difference in temperature between inside and outside, which are constantly pulling at every joint and fiber of the structure. In truth, the machine has an easy time in comparison, with its periods of rest, but there is no let-up to the stresses and strains in the box.

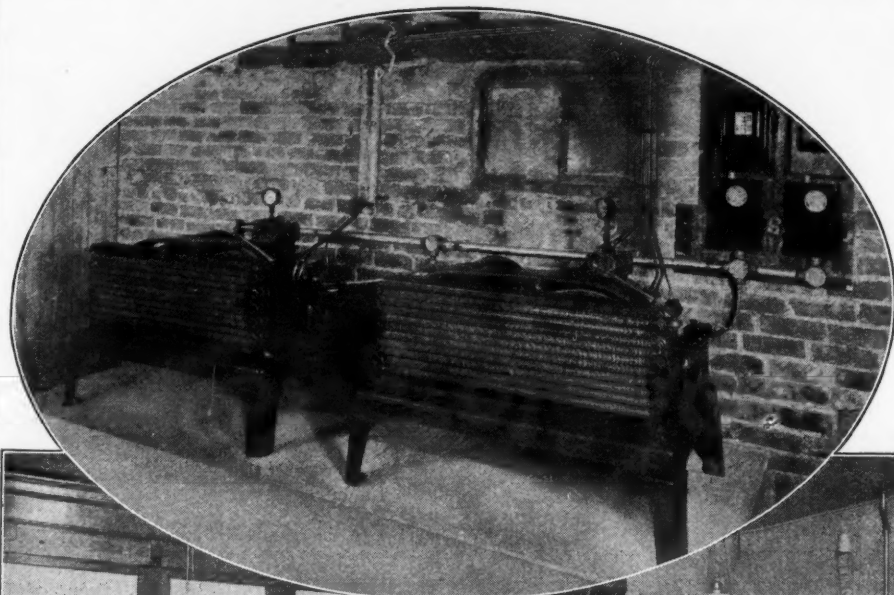
Moisture is another unseen but ever-present enemy to the cabinet. Ceaseless in its attack, it searches out the slightest weakness and once it finds an opening, it pries its way into the vital parts, undermining the structure and destroying the vitality of its insulation.

Too often there is a tendency to assume that mere thickness of insulation is a guarantee of cabinet efficiency. Water-soaked insulation, however thick, is of little value. Waterproofing is of utmost importance. Tests also show that heat leakage through doors is usually greater than through the walls. Proper gaskets and good hardware are a necessity. Finishing materials must be tested to withstand service requirements or customer dissatisfaction is sure to follow.

Correct design of the cabinet is not so simple a problem as it might appear to be. Some authorities claim that air circulation has more to do with the efficient operation of the refrigerator than any other single factor. It has been demonstrated that a slight change in the size of flues will in some cases give efficient refrigeration where, previously, the results were entirely unsatisfactory.

In brief, the refrigerator, or cabinet, is a most important element in the refrigeration system. Impairment of quality is quite likely to increase market resistance, offsetting the apparent advantage gained by a slight reduction in price. The real opportunity for economy lies in the direction of standardization of sizes, simplification of designs and increased production—all of which lead to lower unit cost and increased manufacturing profit as well.

## Zerozone Makes Model Installation



This Zerozone commercial installation, made by the Zerozone Chicago Co., is in the Progressive Meat Market of Wilmette, Illinois. Two Zerozone model "T" compressors are installed in the basement on a solid concrete block. The wiring running from the switches to the motor is enclosed in neat conduit and BX and reduces the possibilities of trouble. Remote controls, manufactured by the Industrial Controller Co., Milwaukee, are used. All tubing is held in copper straps and runs up directly to the cooler without an oil trap.

The large cooler which is kept at a constant temperature ranging from 34° to 36° F., by means of five Zerozone cooling units—two E-C-55's and three E-C-52's. These are mounted on a specially constructed deck installed in place of the regular ice deck. The two E-C-55 coils are mounted on the back of the cooler and three E-C-52's in the front. The extra coil in the front takes care of the leakage caused by display windows and the constant opening and closing of the windows and doors.

An interesting feature is that the relative humidity in the cooler is maintained at a constant high point by an automatic defrosting of the coils on the off part of the compressor cycle. This is done by regulating the point at which the compressor cuts in and prevents a shrinkage in the weight of the meat held in the cooler.



## Better Ice Boxes

"If people used better ice boxes and used them properly, even this moderate figure \* would be materially reduced. The better the ice box, the less the ice bills.

"The Ice Industry is emerging from its chief commercial drawback—lack of outside competition. The widespread advertising of mechanical units has made millions of people conscious of the need of home refrigeration of food, and added millions of tons of ice consumption."

Advertisement of National Association of Ice Industries in *The Saturday Evening Post*.

\* The average all year user pays only \$42.42 annually or \$3.54 per month, according to the advertisement.

## REFRIGERATION INDUSTRY NEEDS TRAINED MEN

Rapid Growth of Electric Refrigeration Field Greatest Urgent Need for Technical Knowledge

The unusually rapid growth of electric refrigeration has resulted in a problem arising from the drafting of men unfamiliar with the principles of refrigeration and their practical application, into active service as salesmen, installation and servicemen and countless other positions. Yet in the work of the sales, installation, and servicemen lies the success of electric refrigeration. These three classes of men comprise the backbone of the industry for they are the connecting link between the manufacturer and the user.

Proper training of these men is essential and this task must be performed by someone with long experience in both refrigeration and refrigeration educational work. The vast amount of technical information which the refrigeration student must acquire must be presented in an easy to learn manner. It must be set forth in an interesting way, it must be thorough, and above all it must be authoritative.

All this information can be condensed into one book or service manual, but—it cannot be learned from a book without the continuous guidance of a personal instructor, supplemented by proper inspiration to continue the study. This information is best served in small portions, under the guidance of competent instructors.

In answer to this demand the Utilities Engineering Institute has perfected an Electric Refrigeration Training Service arranged for home study. During the past year it has been meeting with unusual success and favor throughout the industry. Many manufacturers and dealers have sponsored this training for their employees, and individuals from all parts of the world are now enrolled.

This training service consists of forty-eight lessons and the subjects covered are as follows: Refrigeration industry, preservation of foodstuffs, heat and cold, refrigeration principles, ice and electric refrigeration, evaporation compression sys-

tems, absorption systems, properties of refrigerants, compressor principles, compressor power and pressures, commercial compressors, condensers, expansion valves and chambers, float valves, freezer boxes, thermostats, electric motor drives, machine layouts, piping systems standard pipe and fittings, elementary calculations, miscellaneous systems, reading blue prints, estimating from blue prints, multiple station systems, brine circulation systems, refrigerator construction, cooler construction, installation of plants, maintenance and repairs, the electric motor, motor trouble charts, simple motor repairs and adjustments, and electric wiring notes.

This service was prepared by a group of engineers and educators headed by John B. Rathbun, a practical refrigeration engineer, who has designed a number of small domestic machines as well as refrigerators and power plant systems for leading meat packing and petroleum firms, over a period of 27 years.

## ADVISES ICE DEALERS TO SELL ICE AND FORGET ABOUT COMPETITION

THERE is but little on the small machine I can say. I know their sales this year will approximate thirty-three and one third per cent more than last year in number. I know there are certain weaknesses about their structure, their position. What are we to do? Frankly, forget it and go on about our business.

I have said that so long and so constantly that it is becoming rather an obsession, but I am the more convinced that all the fighting back and all the criticism concerning the machine doesn't help us one solitary bit in our business. You may talk about it all you will, argue against it; while you are doing this you are losing out.

—From an address by Leslie C. Smith at the Indiana Ice Dealers' Association convention, Indianapolis, Ind., Oct. 3-4.

## FIRST AID DIRECTIONS FOR USE IN ACCIDENTS FROM SULPHUR DIOXIDE

Sulphur dioxide is the only refrigerant used in electric refrigeration that is non-inflammable and non-explosive, however, accidental spillage of it on the clothing or body of a person may result in serious consequences if immediate remedies are not made. The danger from accidental spillage of sulphur dioxide is not so much from the physiological effects produced on human life but from the freezing action.

In order to know how to give first aid treatment of sulphur dioxide accidents, Kelvinator has conducted a six month's program of research. Doctors, hospitals, chemists, text books and manufacturers of sulphur dioxide were consulted. From the information gathered from these sources, together with factory experience, the following directions have been made:

### SULPHUR DIOXIDE LIQUID

- A. On the Surface of the Skin.
  1. Apply water liberally to the affected part.
  2. Dry the skin with a dry towel or cloth.
  3. Apply olive oil or sweet oil. If these are not available, apply unused Kelvinator oil.
- B. On Clothing in Front of Wearer.
  1. Remove the person affected to fresh air.
  2. Lay the person on his back so that the sulphur dioxide gas will not rise to the face and be breathed.
  3. Remove the clothing.

### C. Clothing Saturated so that Sulphur Dioxide Penetrates to the Skin.

1. Apply liberal quantities of water by means of a hose, pail or other suitable means to absorb the sulphur dioxide, retard rapid evaporation and prevent freezing of the flesh.
2. Remove the clothing.
3. Dry the skin with a dry towel or cloth.
4. Apply oil as in A.

### D. Splashed in the Eyes.

1. Lie the head back and pour water in the eyes, holding the eyelids open.
2. Place two drops of sweet oil or prime castor oil in each eye.

### E. Swallowing.

1. Dissolve one teaspoonful of bicarbonate of soda (baking soda) in a half glass of water and swallow immediately.
2. Follow with a teaspoonful of sweet oil or olive oil.

### SULPHUR DIOXIDE GAS

#### A. Overcome.

1. Remove the person affected to fresh air.
2. Bathe the face and head freely with cold water.

In all cases call a physician without delay.



## REX PRESENTS NEW LINE OF CABINETS FOR 1929 SEASON

Ten Models for Residences and Ten for Apartments

FOR thirty years pioneers in the manufacturing of products requiring skill and experience in the shaping of wood and metal and the application of paint to these materials, the Rex Manufacturing Company began the building of cabinets for mechanical refrigeration about three years ago, and then only after many months of exhaustive research and tests. Their growth has been one of the most interesting developments in the refrigeration industry.

Previous to their entry into the refrigeration field the Rex Company played an important part in the manufacture of buggies (from 1898 until about 1914) and then in the production of California type tops and Rex enclosures for touring cars and roadsters.

The Rex Company is one of the first to make formal announcement of their 1929 models. The Rex line embraces ten standard residence models, ranging in size from 5.5 to 15 cubic feet food storage capacity, and ten standard apartment-house models of 4.5 to 5 cubic feet food storage capacity. There is also the choice of the standard models with vegetable-bin or wire shelf in compressor compartment, detachable legs where remote installation is made in apartment houses, and top-icers when desired. The residence line is offered with the compressor compartment for installation in the cabinet, while the apartment-house line is available with compressor compartment for installation in cabinet, or with detached compressor compartment. In the residence models porcelain interior finish is standard, with either porcelain or lacquer exterior. In the apartment house models the lacquer finish is standard, with either porcelain or enamel interiors. Rust-resisting iron is used in both the lacquer and the porcelain finishes.

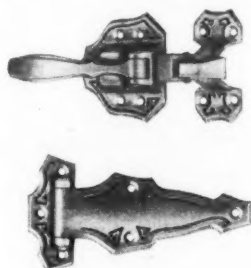


Fig. 1

The hardware is entirely new and distinctive; the hinges and latches on the residence models are of heavy brass, nickel-plated with designs in grooved lines,

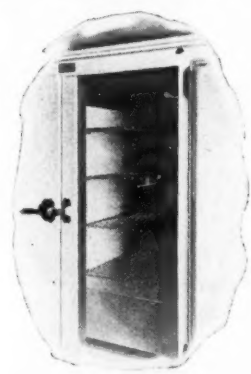


Fig. 2

emphasized in black enamel. The satin finish of the hardware requires very little attention at the hands of the housekeeper.

A new note in cabinet beauty is reflected in the drawn tops, dispensing with sharp corners and bulky metal trimmings. The food compartment is seamless and rests on a level with the door-sill, facilitating cleaning. Interior of cabinets (see Fig. 2) is fitted with wire shelves supported by hangers; the cooling-unit compartment, with defrosting tray, permits of easy installation of any of the standard units. A full-swinging door to the

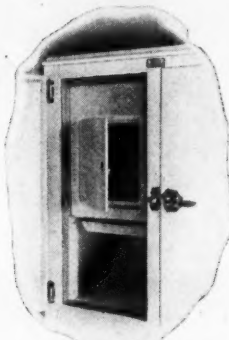


Fig. 3



Fig. 4

cooling-unit is removable and is an added feature to the 1929 line. Fig. 3 shows the door open and Fig. 4 shows the ease with which the entire panel may be removed. Insulation throughout is of corkboard of from 1½ in. to 2½ in. thickness in the apartment-house models and from 2 in. to 3 in. in the residence models. The thickness of the insulation is controlled by the size and requirements of each individual model.

While pure white is standard in both the lacquer and porcelain finishes, practically all models are available in a choice of several new and pleasing color combinations.

A new booklet illustrating and describing the entire line, and carrying detailed specifications, is being distributed.

## REV. NYCE INVENTS REFRIGERATOR AT PERU, IND. IN 1860

Earliest Patent Claimed by Fore-runner of American Refrigerator Company

BACK in the year 1860 the first patented refrigerator ever constructed was built in Peru, Indiana, according to H. L. Grimm, vice-president of the American Refrigerator Co. This work was done under the direction of the inventor, Rev. Benjamin M. Nyce, then a pastor of the Presbyterian Church at Greensburg, Ind. Rev. Nyce brought his invention to Peru to be built in what was known as the Howe factory and managed by the late Capt. A. N. Dukes, who in later years owned and operated the Indiana Refrigerator Company.

The first refrigerator was installed in a Peru business house and was in use

for many years. Fruit was kept from the summer months of 1861 until late in the following winter and then distributed among friends interested in the undertaking, among whom was B. Silliman, then president of Yale University. Encouragement received from Mr. Silliman and others inspired the inventor to continue development of his scheme. President Silliman wrote as follows: "Every considerable city should have a fruit house in its vicinity." That the broader aspects of the invention did not occur to the educator seems strange today when household refrigeration is practically universal.

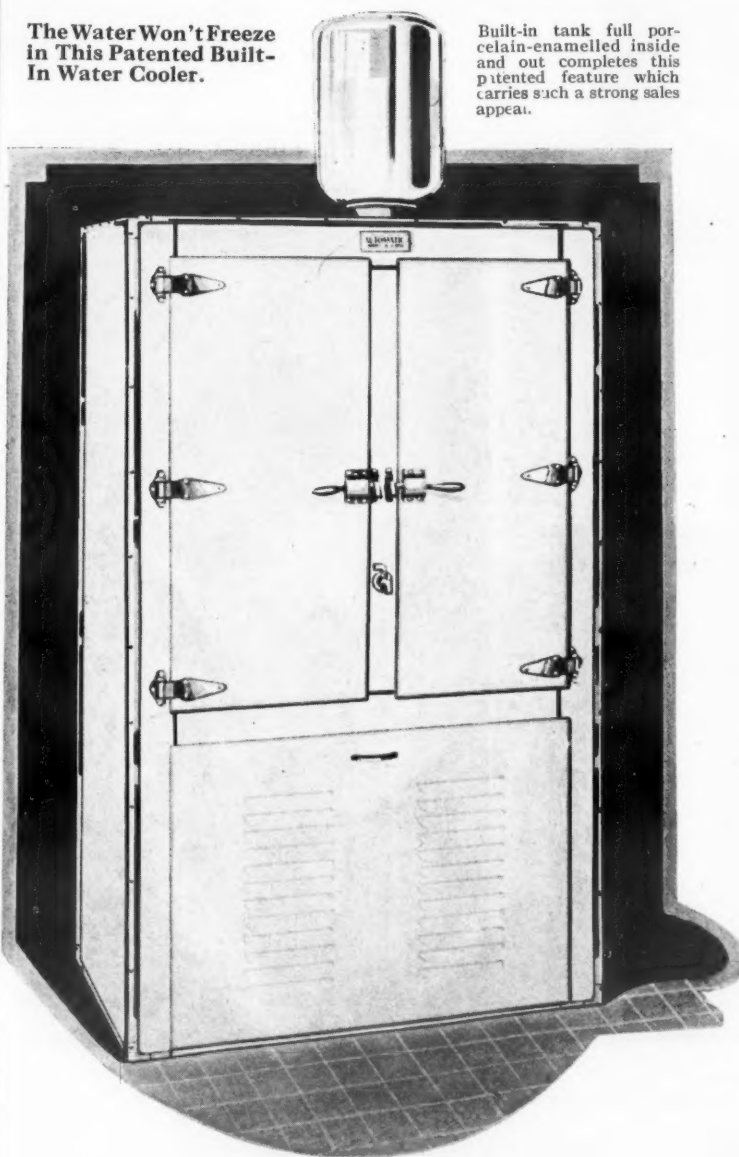
The Indiana Refrigerator Co. was operated for a number of years by Captain Dukes, employing nearly a thousand workmen in the construction of refrigerators. This plant was later taken over by E. H. Shirk and operated under the names of the Shirk Refrigerator Company and the North Star Refrigerator Company. The refrigerator manufacturing industry in Peru grew until 1912 when it is stated the plant was manufacturing 75,000 refrigerators per year. Then came the high waters of 1913 and the Indiana Refrigerator Company suffered untold losses. In 1916 this company moved its seat of operations to Richmond, Ind.

The former employees of the Indiana Mfg. Co. being long residents of Peru and experienced in the manufacture of refrigerators, then organized a company in the latter part of 1916-17 known as the Modern Refrigerator Co., which company continued in business until taken over by the American Refrigerator Corp. in 1926.

Royalties on refrigerators, cold storage systems and refrigerator cars were paid to the Rev. Benjamin M. Nyce by companies throughout the country for many years; and Peru is justly proud of the position it holds in the refrigerator manufacturing industry as being "The Birthplace of Refrigerators."

The Water Won't Freeze in This Patented Built-In Water Cooler.

Built-in tank full porcelain-enamelled inside and out completes this patented feature which carries such a strong sales appeal.



Model No. 1495

## A Complete Line to Choose From

AUTOMATIC apartment model Cabinets offer you a variety of sizes and models to choose from. They offer enduring usefulness and complete satisfaction. They assure you of a decided saving in food, time and toil, at a minimum electric cost. And then, the crowning immaculate beauty of design and finish is a source of endless pride and joy.

### All Doors Equipped with Gaskets

Carefully fitted doors firmly held in place by handsome hardware of correct weight and strength to safeguard the efficiency of these cabinets through years of satisfactory service.

Write for Detailed Specifications

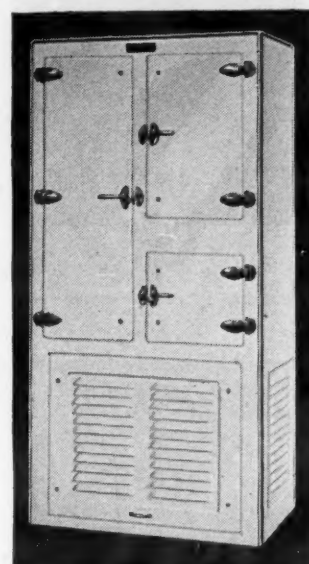
## The Bohn Franchise

For those dealers who appreciate the merchandising possibilities of a nationally known, and very complete, line of refrigerators.

During thirty-two years of quality manufacturing, the BOHN organization has been responsible for over eighty per cent of the scientific advance in refrigerator construction.

BOHN was the first to build an all-porcelain refrigerator and is today the world's largest manufacturer of these beautiful and practical cabinets.

A large production enables us to offer the lowest prices in the company's history.



All-porcelain base cabinet models in 5-6-7-9 and 12 cubic feet.

Nothing finer can be said of a refrigerator than "It was built by BOHN."

BOHN REFRIGERATOR COMPANY  
SAINT PAUL, MINNESOTA

NEW YORK

CHICAGO

BOSTON

## Let These Super-Features Earn Bigger PROFITS for You

Your profits are largely dependent on the ease with which your merchandise is sold and the amount of it that stays sold to satisfied customers.

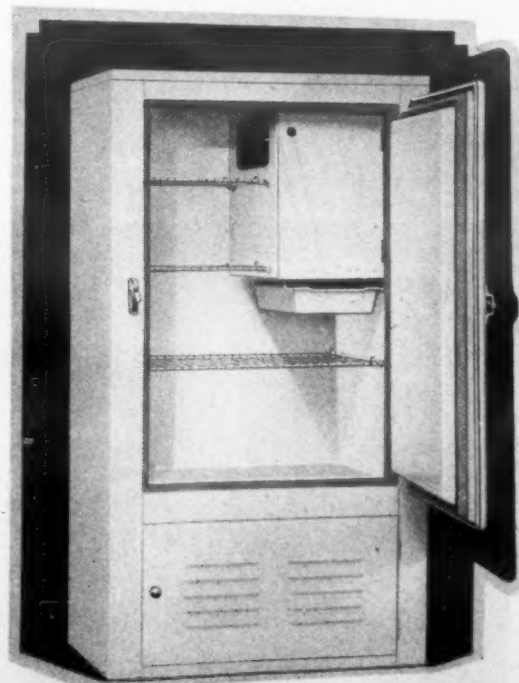
In other words quality and turnover.

And the new line of Automatic Cabinets, both with and without water cooler in either porcelain or steel, certainly meet both of these requirements and more.

Eye appeal, scientific design, and sturdy construction PLUS—THE PATENTED AUTOMATIC WATER COOLER. Everywhere this cooler has met with instant approval. Just a turn of the faucet supplies an abundance of pure ice cold drinking water.

Write to us today. We'll send you complete information regarding the profit possibilities of this line.

Address Department E  
Illinois Refrigerator Company  
Morrison, Illinois



Apartment Model No. 1101  
STEEL CASE ENAMEL LINED  
MEDIUM BASE STYLE

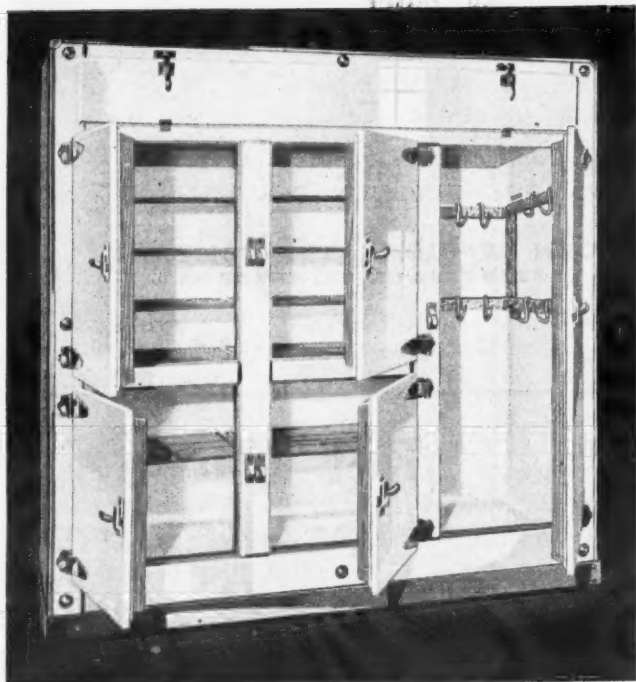
## New Autodrink Dispenser Attracts Attention at Bottlers Convention



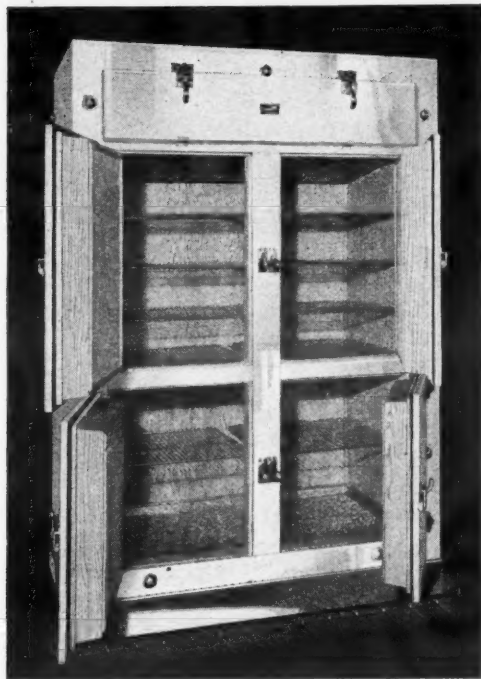
Exhibit of Autodrink Corp. at Carbonated Beverage Exposition, Convention Hall, Detroit, Nov. 12-16. See story on page 2.



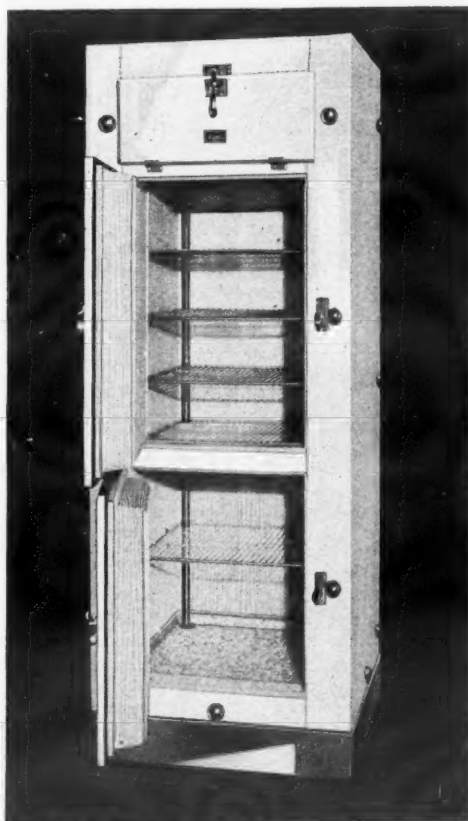
# NEW Cabinets



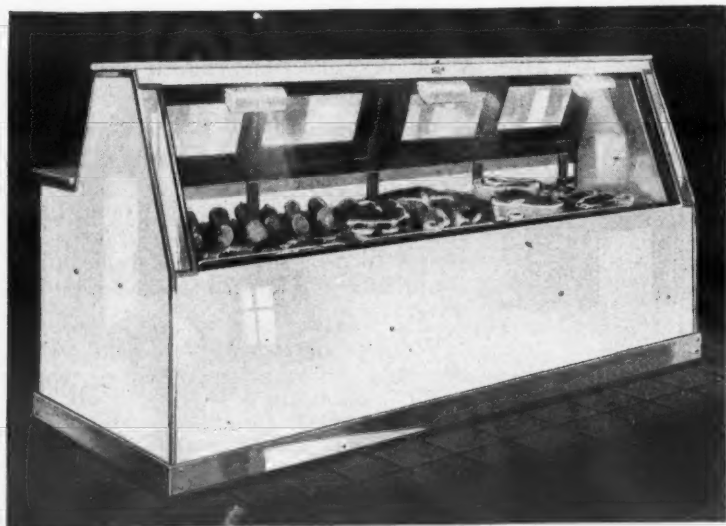
Model No. PL 75-62  
Exterior Dimensions:  
Width, 85 1/4 in.; Depth, 31 in.; Height, 84 5/8 in.



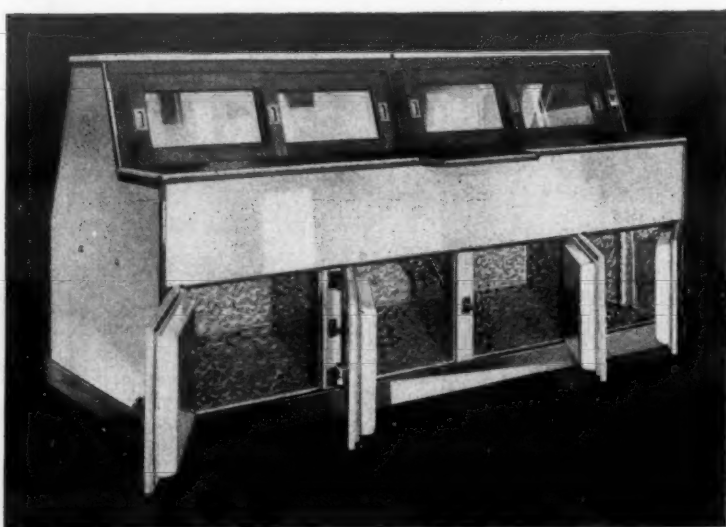
Model No. LH 48-40  
Exterior Dimensions:  
Width, 57 1/2 in.; Depth, 31 1/4 in.; Height, 85 in.



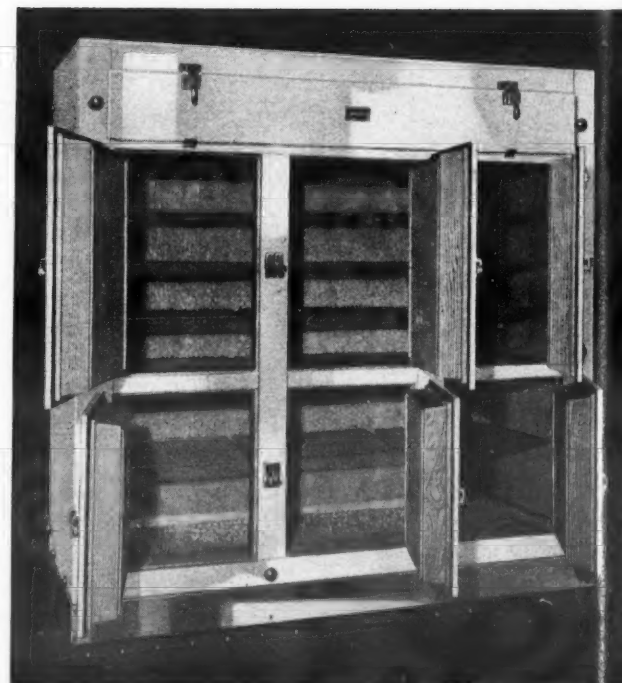
Model No. LH 22-18  
Exterior Dimensions:  
Width, 31 1/4 in.; Depth, 31 1/4 in.; Height, 85 in.



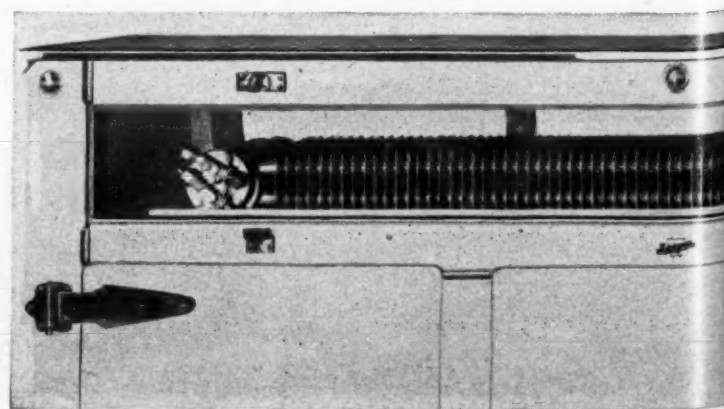
8-foot Porcelain All Glass Display Counter.  
Can also be obtained in 10-foot or 12-foot lengths.



Rear View of Display Counter, showing Work or Scale Bench and Galvanized Iron Lined Storage Compartment.



Model No. LH 75-62  
Exterior Dimensions:  
Width, 84 1/4 in.; Depth, 31 1/4 in.; Height, 85 in.



View of Seeger Overhead Tube or Coil Compartment. Note for Installation.

SEEGER has created a new different Refrigeration Cabinet—the over compartment—New in appearance and New in its method of re-

The overhead Tube or Coil compartment, a innovation by Seeger in Refrigeration Cabinets, a practical feature of the New Commercial Cabinet, a considerable note in that it provides extreme capacity, yet minimum total maintenance, convenient storage afforded previously.

Although New, this type Cabinet, in several Tests, proved more economical in its use in low temperature essential for food and products, with minimum low power consumption of Commercial Cabinet.

Never has there been a line of approach in Efficiency, Convenience, Appearance, Room partitions and General Maintenance. The same has been maintained for over a quarter of a century and every Cabinet, whether finished with the lacquer finish on special steel interiors. The chipless porcelain lacquer finish. The Seeger Plant, a guaranteed thing.

Only the Seeger Factory with its modern Machinery and Equipment can produce this quality of incomparable Cabinets at a price limit.

## SEEGER REFRIGERATOR

NEW YORK  
389 Madison Ave.

BOSTON  
26-28 Providence St.

ATLANTA  
110 Spring St.

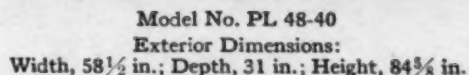
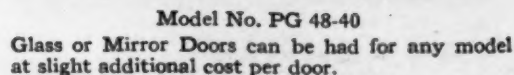
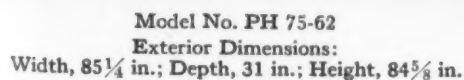
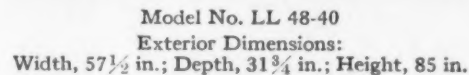
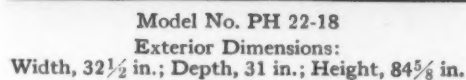
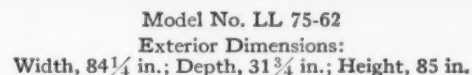
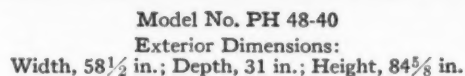
CHICAGO  
228 No. LaSalle St.

SEATTLE  
119 Fourth Ave.

CABINETS BY  
**Seeger**  
SAINT PAUL



**LOS ANGELES**  
1340 E. Sixth St.



CABINETS BY  
*Seeger*  
SAINT PAUL



## Baron Parrilli Sees Increasingly Profitable Market for Electric Refrigeration in European Countries

ELECTRIC refrigeration is rapidly gaining a sound foothold in all parts of Europe, according to Baron Luigi Parrilli, European manager for Kelvinator Corporation, Detroit. Baron Parrilli has just concluded a visit of several weeks at the Kelvinator factory in Detroit to familiarize himself with the 1929 line and merchandising plans.

Like the automobile, electric refrigeration was first considered a luxury beyond the means of all Europeans except the nobility or the very rich. Baron Parrilli believes that Europe has discarded this viewpoint in connection with electric refrigeration and that people now recognize the advantages it offers in convenience, economy and sanitation for all classes of incomes.

Differences in attitude toward electric refrigeration found among the various countries on the Continent, says Baron Parrilli, are directly traceable to differences in character and modes of living.

In France, for instance, the people as a rule, are not quickly won over to mechanical appliances for the home—nor do they so readily accept refrigeration for the idea of convenience. Germany and Italy on the other hand, like it because it is mechanical.

Another reason for the ready acceptance of Kelvinator in countries like Switzerland, Holland, Norway and Denmark is found in the attitude of the housewife toward her kitchen. In England and Italy, however, the lady of the house is not so closely concerned with kitchen problems, and as a result is not so readily interested in better refrigeration.

Baron Parrilli is very optimistic regarding commercial electric refrigeration. He is of the opinion that there is no limit to its possibilities if manufacturers prove to the European business man that electric refrigeration will perform efficiently and economically. Commercial business is growing enormously every year and at the present time composes 60 per cent of all electric refrigeration business in Europe.

Parrilli says salesmen prefer commercial selling. There are several reasons for this, but by far the greatest is the position taken by Europeans toward house-to-house selling. Not only do they object to this practice, but it cheapens the product offered to them.

Consequently Baron Parrilli has given a great deal of attention to new ways of securing domestic prospects. Newspapers and other publications play their part, in Europe as in America. Fairs and displays are also used to advantage. But probably the greatest single factor in securing prospects and selling is the favorable advertising given by word of mouth from owner to friend.

While the United States sets the example for apartment house installations, electric refrigeration is fast becoming a big feature for new buildings in Europe, according to Parrilli. Owners of many old buildings and homes, becoming acquainted with its advantages through successful apartment house installations are equipping their buildings with electric refrigeration.

Ice cream, a strictly American dish, is rapidly gaining favor abroad. England has already made good progress. Germany, next in line, is putting capital into the business on a large scale to manufacture and distribute ice cream after American methods. This is very favorable to electric refrigeration, and Baron Parrilli predicts a splendid future for this side of Kelvinator business.

The display counter so popular in America, is entirely new to European merchants, but the idea is growing and business men are slowly but surely becoming convinced of the selling value of hygienic, open displays.

No consideration of foreign markets would be complete without giving some attention to the rate of exchange prevailing in the countries involved. In some places an unfavorable exchange rate makes selling electric refrigeration, or any other commodity not essential to life, increasingly difficult because of high prices. There are countries, however, more fortunately situated where prices are quite in line with American quotations.

Summing up, Baron Parrilli feels that the future of electric refrigeration on the continent is very bright. Kelvinator now has 16 distributors in continental Europe.

### MILWAUKEE DEALERS DISPLAY MODELS AT FOOD SHOW

Approximately 125,000 women attended the tenth annual Food and Household Exposition held at the Milwaukee Auditorium from Oct. 21 to 28 in Milwaukee, Wis. Electric refrigerators were displayed at the show by the Lindsay Automatic Refrigerator Co.; the General Electric Refrigerator Co. and the Copeland Refrigerator Co.

The Milwaukee Journal sponsored the exposition and ran a special food show section.

### FIVE MAKES DISPLAYED AT PHILADELPHIA SHOW

A number of domestic electric refrigerators are being displayed at the Electric and Radio Show, which the Electric Club of Philadelphia, Pa., is conducting in the Commercial Museum, Nov. 17 to 24 inclusive.

The firms having electric refrigerator displays at the show are: Kelvinator-Philadelphia, Inc.; J. J. Pocock (Frigidaire); Judson C. Burns (General Electric); Philadelphia Electric Co. (Welsbach and Servel); and Schimmel Electric Co. (Copeland).

### COPELAND SALESMEN STRIVE FOR "CRISMUS" CONTEST PRIZES

Leaders in the "Crismus" ice cube contest being conducted by Copeland Products, Inc., Detroit, up to Oct. 27 have been announced. Edward J. Penny, Flint, Mich., in Class B was leading all other salesmen. The leaders in the other classes were: Class A, W. L. Kirkpatrick, Los Angeles, Calif.; Class C, W. Rahe, Cincinnati, Ohio; Class D, W. C. Haines, Tulsa, Okla.; Class E, Maurice Atlas, Minneapolis, Minn.; Class F, C. O. Bankston, New Orleans, La.; Class G, C. Maloney, Indianapolis, Ind.; Class H, F. C. Obert, Kingston, Pa.; Class I, E. J. Gobrecht, York, Pa.; Class J, E. A. Eve, High Point, N. C.; Export Class, George Gale, St. Thomas, Ont.

The contest opened on Oct. 1 and will close on Dec. 1. Sixty prizes will be given and the president's prize, a Copeland Model N5, will be awarded to the high salesman in this country and Canada.

Points in the contest are scored by ice cubes, each cube having a value in dollars.

### DRUG STORE INSTALLATIONS PROVE EFFECTIVE SALES AIDS

By installing electric refrigerators in six drug stores in the residential district of Denver, Colo., and another in a downtown meat market, free of charge, W. R. Trippie, manager of the electric refrigeration department of the B. K. Sweeney Electrical Co., secured 30 new prospects and sold 5 refrigerators. The druggists were urged to use the refrigerators for syrups and carbonated beverages and were given elementary talking points on the advantages of electric refrigeration. Special prospect cards were given to them and a commission of 2 per cent was paid to all leads which resulted in sales.

Salesmen for the Sweeney company found that they could induce their prospects to go to one of these neighborhood stores for a demonstration in cases where longer trips to the company display room were objectionable. The machines were replaced with new ones every week or ten days, so that the refrigerators would not be second hand when they reached the ultimate purchaser.

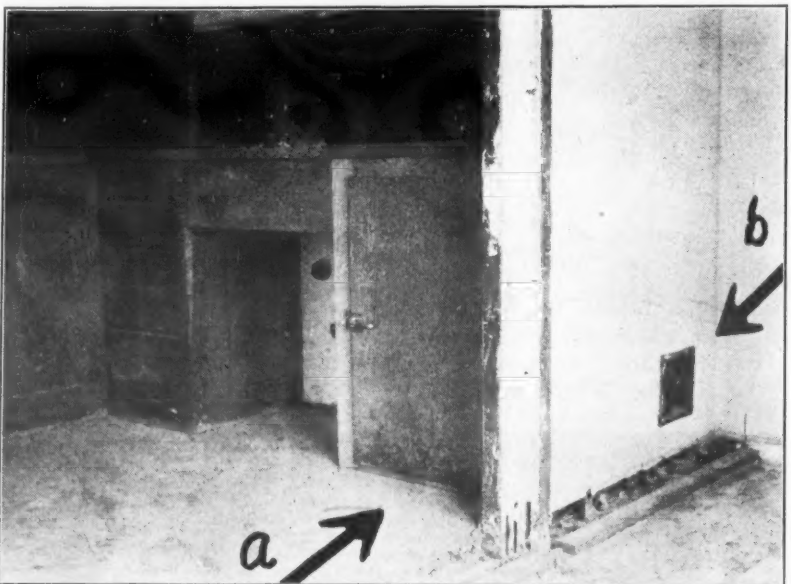
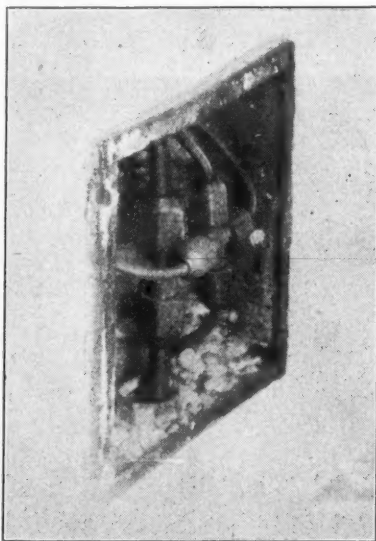
### Panel in Closet of Apartment Makes Connections Accessible

By C. W. Geiger

Installation men will be interested in the arrangement for making the copper tubing connections of a multiple job accessible which is shown in these pictures of a San Francisco apartment installation.

The refrigerator (indicated by arrow "a" in the picture below) is built in under the kitchen sink and a panel opening (indicated by arrow "b") is provided in the closet of an adjoining room.

The panel, roughed in, with connections already completed, is shown again in the close-up picture at the right. The tubing is run in conduit.



### NEW DEALERS & DISTRIBUTORS

Recent appointments announced by manufacturers and new sales outlets reported from the field.

#### Sparklets, Inc., New York, N. Y.

Distributors:  
Modern Home Utilities, Inc., Waterbury, Conn.  
F. P. Lutz Co., Dayton, Ohio.  
Dakota Refrigeration Co., 313 Broadway, Fargo, N. D.  
Arnold-Ervin Co., 210 W. 3rd St., Davenport, Iowa.  
City Coal Co., Ltd., 411 Portage St., Winnipeg, Man., Canada.  
City Coal Co., Ltd., 712 Seymour St., Vancouver, B. C., Canada.  
City Coal Co., Ltd., 1807 Cornwall St., Regina, Sask., Canada.  
City Coal Co., Ltd., 408 7th Ave., W., Calgary, Alta., Canada.  
Young & Hazard, 10457 Jasper Ave. West, Edmonton, Alta., Canada.

Lake States G. E. Supply Co., Toledo, Ohio.  
Beale & Teubner, Los Angeles, Calif.  
Tenk Hardware Co., Quincy, Ill.  
Midwest Refrigeration Co., 707 Grand Ave., Des Moines, Iowa.

Dealers:  
Portsmouth Gas Co., Portsmouth, Va.  
Savannah Electric & Power Co., Savannah, Ga.  
Worcester Electric Light Co., Worcester, Mass.  
Norwood Gas Co., 530 Washington St., Norwood, Mass.  
Mississippi Power & Light Co., Jackson, Miss.  
Princeton Motor Shop, Inc., Princeton, N. J.  
Savannah Sales Co., 123 Whittaker St., Savannah, Ga.  
Tampa Electric Co., 810 Tampa St., Tampa, Fla.  
Alderman Drug Co., Hartford, Conn.  
Peoples Light Co., 21 Broad St., Pittsford, Pa.  
Kings County Lighting Co., 6740 4th Ave., Brooklyn, N. Y.  
Abington & Rockland Electric Light & Power Co., North Abington, Mass.

Distributor:  
Southern Electric Co., Bellflower, Calif.

Dealers:  
Coleman Electric Co., Elkhart, Ind. (Servel).  
Newport News Furniture Co., Inc., Newport News, Va. (Electrolux).  
Floyd J. Wood, Niles, Mich. (Servel).

### A Problem Solved In Iceless Refrigerator Seal Rings made from



Owing to the many failures of packing used for stuffing boxes around the crank shafts of mechanical refrigerators, the metallic seal ring has become almost universally adopted.

For years manufacturers have been looking for a material that will not load or score the crank shaft and that does not require a flood of lubricant.

MUELLER "600" BEARING METAL IS THE SOLUTION OF THE PROBLEM.

It is readily soldered, thus eliminating a two-piece assembly.

It will wear longer than any other metal used for a similar purpose and run at a much lower temperature.

Many iceless refrigerator manufacturers have now adopted it as standard.

Let us send you complete information

Remember, we manufacture a complete line of valves and fittings. We can supply your every requirement.

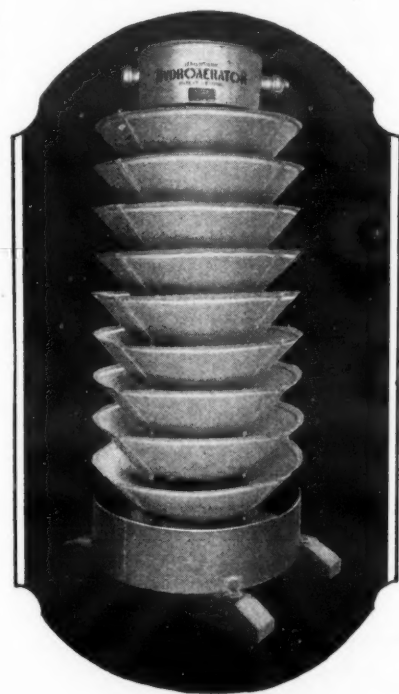
Send us samples or blue prints for quotation

**Mueller Brass Co.**

PORT HURON, MICH.

THREE GENERATIONS OF BRASS MAKING

### There's nothing else like it!



"HYDROAERATOR"

The Atmospheric Hydroaerator has greater prime cooling surface than any other cooling tower of its size and weight. The one-ton unit weighs only 150 pounds—easier to install, a 30-minute, 2-man job. And, it is the only cooling tower with universal wind surface, for it makes no difference which direction the wind is from, maximum surface is presented. Send for complete facts now about the Hydroaerator for cooling the condensing water of your electric refrigerating machines.

### Atmospheric Hydroaerator

Patent Pending

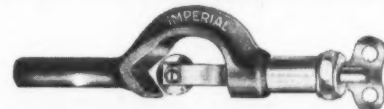
All Metal Atmospheric Cooling Tower

ATMOSPHERIC ENGINEERING CO.

Manufacturing Engineers  
Houston, Texas

### Three Aids To Better Joints

#### Imperial Tube Cutter

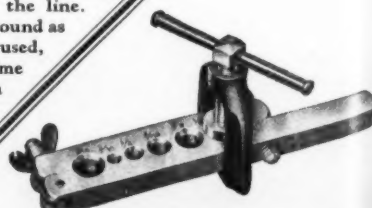


Here is a highly efficient tool for cutting copper, brass, block tin and lead tubing. It takes all sizes of tubing from 1/8" to 3/4" and makes a right-angle cut, quickly and cleanly, leaving no burrs or chips to clog the line.

The tubing does not become out of round as when put in a vise. When this tool is used, tubing can be cut in half the time required by old methods and a far better job results. No. 94-F Tube Cutter, each

Brass Forgings

\$2.50



#### Imperial Flaring Tool

The Imperial Flaring Tool gives the proper flare and taper to the tubing for making up joints. A perfect flare means a tight joint, and this tool does the work in the least time and with the utmost simplicity. No loose dies—no vise necessary. No. 93-F takes tubing sizes 1/8", 1/4", 3/8", 1/2", 3/4", 1". Each.....\$3.00  
No. 95-F takes tubing sizes 1/4", 3/8", 1/2", 3/4", 1". Each.....\$4.00

Accurately made to meet all the requirements of Iceless Refrigerator Manufacturers. Will not leak. Let us quote on your requirements.

IMPERIAL BRASS MFG. CO., 565 So. Racine Ave., Chicago, Ill.



## ANNUAL CONVENTION OF A. S. R. E. TO BE HELD DECEMBER 5-8

One Joint Session with A. S. M. E.

Electric refrigeration will get special attention when the members of the American Society of Refrigerating Engineers gather for their 24th annual convention to be held at the Hotel Pennsylvania in New York, N. Y. from Dec. 5 to 8. The program committee has announced several changes in the plans. The convention will last four days instead of three as planned, with the opening date on Wednesday instead of Monday. It will officially open at 1:30 P. M., Dec. 5 and close at 1:00 P. M., Dec. 8.

The convention will be made up of six sessions, five being held at the Hotel Pennsylvania and one jointly with the American Society of Mechanical Engineers in the Engineering Building, 29 W. 39th St. The five sessions will be devoted separately to research, refrigerating machinery, refrigeration application, electric refrigeration and refrigerators and will contain three or four papers each.

Subjects of some of the papers to be read are as follows: welding, use of fins on condensers, air conditioning developments, daily plant work, farmers' specifications for refrigeration, flake ice manufacture, design of shaft seals, new developments in refrigerator finishes, effects of climate on electric refrigeration specifications, flow of heat in refrigerators and a new process of oil refining using sulphur dioxide refrigeration.

Thursday afternoon, Dec. 6, will be devoted to an inspection tour. The annual dance will be held at the Hotel Pennsylvania on Friday evening.

## UNITED POWER & LIGHT WINS CUP FOR REFRIGERATOR SALES

The United Power & Light Corp., Abilene, Kans., was the winner of the silver cup offered by Clement Studebaker, president of the North American Light & Power Co., Chicago, Ill., to the subsidiary having the largest number of electric refrigerators sales and the highest dollar value per meter from Jan. 1 to Aug. 31. During this period the United Power & Light Corp. sold 538 refrigerators, totaling in value to \$131,179.43.

The percentage of refrigerators sold per meter was 61 and the dollar value of sales per meter was 3.97. The cup carried with it a prize award of \$175, of which \$50 goes to employees outside of the commercial department.

## UNIVERSAL COOLER REPORTS INSTALLATIONS IN CANADA

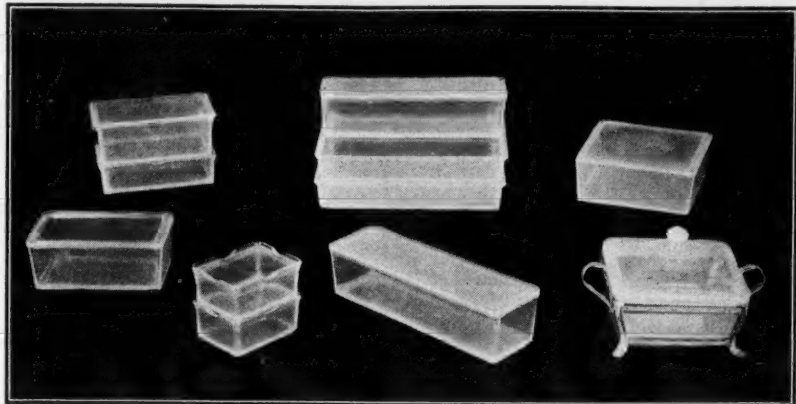
Recent installations made by Universal Cooler Co. of Canada, Ltd., Windsor, Canada, include an installation in a thirty-seven apartment building at Chatham, Ont., and one in a fourteen family apartment in Windsor. Several installations have been made in smaller apartments.

Among the commercial installations made recently several have been the walk-in type cooler. The St. Clair Restaurant and Tusons, florist, both of Windsor, have had this type installed.

A recent sale was to Fred Martin, prominent promoter of the Detroit-Windsor tunnel project.

A complete tool making and machine shop has been added by the company with W. H. Lucr as superintendent and J. H. Stoliker, service superintendent. This shop, it is planned, will render valuable assistance in connection with work of a special nature.

## Attractive Sets of Nested Glassware



## REFRIGERATOR DISHES OF HEAT RESISTING GLASS SAVE HOUSEWIFE WORK

Heat resisting glass is used in the refrigerator sets made by the H. C. Fry Glass Co., Rochester, Pa. The sets are suitable for cooking food as well as storing them in the refrigerator and thereby eliminate the transferring of foods from storage dishes to cooking dishes, then to serving dishes and back to storage dishes. Storage space in a refrigerator can be materially increased by systematic use of dishes that are designed for the saving of space, and at the same time present a much more orderly appearance. The glass dish makes it possible for the housewife to easily find the particular stored food she wants. By using proper storing utensils, unpleasant odors in the refrigerator can be decreased. Small vents or apertures in the dish allow for a necessary small circulation of air.

Three of the smaller dishes in the refrigerator set have been designed primarily for the storage of small left-overs of food as well as the preparing of small amounts of foods that may be cooked in casseroles. A dish a little larger was designed principally for storing such food as butter, oleomargarine, cheese, lard, and such foods.

The square casserole is especially adaptable for the cooking of macaroni and cheese, New England dinner, baked beans, escalloped potatoes, tomatoes or oysters. In fact, any medium sized casserole food is easily handled in this. This dish was designed for refrigerator use in storing lettuce or small fruits, as apples, peaches, plums, and for eggs.

Oblong casseroles are useful for storage or butter, cooking or storing of meat loaf, or for storage of celery, asparagus, rhubarb, carrots, cucumbers and foods of this nature. This dish makes an excellent sandwich load or bread pan, and is useful in making loaf cakes or ginger bread.

The larger utility tray is for the storage of such foods as steaks, chops, slices of ham, fish, or for storing berries. It is well adapted for roasting chicken, roast beef or pork. It is useful in baking of foods as corn bread, puddings or ginger bread.

## Kentucky Utility Co. Sales Show Big Gain in First 6 Months

The commercial department of the Kentucky Utilities Co., Louisville, Ky., sold 149 electric refrigerators during the first six months of 1928, an increase of 105 over the same period in 1927.

## Appointed Manager of Universal Cooler Factory in Canada

C. E. Costa'n, who has been connected with the company for some time as chief of the accounting department, was recently appointed factory manager of the main Canadian plant of Universal Cooler at Windsor, Ont.

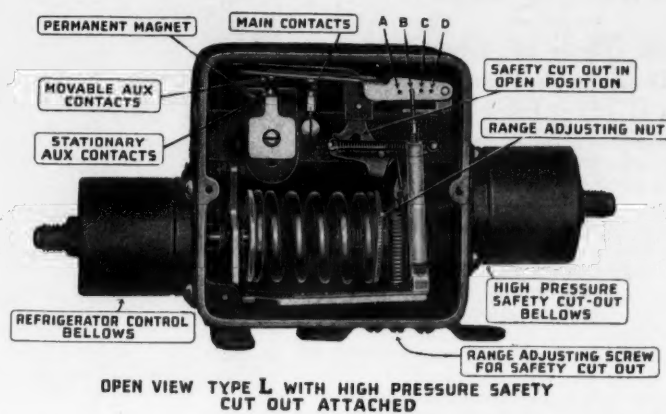
## SOVIET PLANS TO MAKE AN INSULATION OUT OF PEAT

The Soviet government proposes the erection in Russia of a factory for the production of insulating materials from peat. Hitherto, imported cork has been used, but recent experiments have proved peat a good substitute. Russian delegates will visit Germany to learn the process of the manufacture of insulating material from peat.

## L. C. Keely to Visit Pacific Coast Zerozone Distributors

L. C. Keely, vice-president and general sales manager of the Iron Mountain Co., Chicago, Ill., making a five-weeks' trip to visit Zerozone distributors on the Pacific Coast. He will conduct sales meetings in Seattle, Tacoma, Portland, San Francisco, Los Angeles, and on the return trip at Houston, Tex., and New Orleans, La.

## NEW PENN COMBINATION CONTROL and SAFETY SWITCH for REFRIGERATIVE UNITS



The Penn Electric Switch Co. now offers their regular Type L Magnet switch, provided with a high pressure safety cut-out, in addition to the regular temperature or pressure controlling mechanism, all in one compact unit. (See Cut.) The high pressure diaphragm is to be connected to the discharge side of the refrigeration system. In case an excess pressure is built up, due to any cause whatsoever, the safety feature opens the switch and stops the unit. When normal pressure has again been restored, this feature will permit the switch to close and the unit will continue to operate.

The operations of the high pressure safety element and controlling mechanism are entirely independent and in no way affect each other.

This combination control and high pressure safety switch can be furnished for pressure or temperature controlled systems using any of the usual refrigerants—excepting ammonia.

We solicit inquiries from manufacturers and others interested in such a control.

**PENN ELECTRIC SWITCH CO., Des Moines, Iowa**



## High Spots in a High Powered Line



HERE are shown latches and hinges that are giving service and satisfaction on many of America's outstanding refrigerators. In the upper left is shown our 4061 reversible roller latch, a very sturdy model with a large following because of its simple, fool-proof design. Series 4014, shown in the upper right, is exclusive with us—a powerful, positive, automatic roller latch for commercial installations. Series 4074 in the lower left is an automatic model with an extra strong, deep throw, in which the shape

of the strike acts as a wedge, closing the door tight under all circumstances. At the lower right is series 4044, the most simple automatic reversible latch ever devised, with a patented spring and bolt action that is absolutely positive. All of these models are available in heavy nickel, genuine chrome plate, or any special finish desired. We will be glad to call with a full line of samples. If you prefer, we will mail samples with complete information and prices.

**SERVICE AND  
BEAUTY IN  
METAL**



**GRAND RAPIDS BRASS CO.**  
GRAND RAPIDS, MICHIGAN

## Welsbach System in Grocery



A typical grocery store box equipped with a Welsbach brine tank system is shown above. It is located in the Van Tour Store at New Britain, Pa.



## KEEP YOUR EYE ON "OLD MAN SLUMP" ANALYZE YOUR JOB\*

Maybe the Tools of Your Trade  
Are Dull; Look Them Over

THERE are times in the experience of every salesman when the road of progress stretches straight ahead like a gray ribbon of concrete and under the whirl and rush of business we unconsciously ease up—lose some of the fine points of our selling technique. Like the boxer facing easy opposition, we get out of condition, lose our staying power and judgment of distance and the first thing we know a tarter knocks us for a row of ten pins.

The road to success is never smooth all the way. Regardless of line or season or the amount of experience we have, we hit places where the going is rough and before we know it our batting average takes a nose dive. Such a streak of hard luck comes at times to even the best of us. Difficulties come because of faults within ourselves or it may be business conditions become less favorable. Whatever the reason, the result is the same, orders suddenly fall off, sometimes to the vanishing point. New tactics and strategy are required to bring them back to normal.

Under easy selling conditions, naturally, any salesman can make a good showing, but the worthwhile man is the fellow who can take the bumps with a smile, serene in the confidence that in a short time he can put his finger on the difficulty and bring back his winning stride.

Some think the way to get back to normal from one of these nose dives is to let George do it—they want to hit the trail for the home office. Others look with covetous eyes for easier lines or easier territories as if any line or territory were immune to bumps. Still others think all they have to do is to try harder, put in more foot work for more hours, an effort to be commended but which doesn't always get the desired result with the least waste of time and effort.

Get at the difficulty—analyze the situation. With each new interview find out why the prospect failed to act. You will probably discover that the tools of your trade have become dull—you are cutting your talk short—some of your telling arguments have been left out—or perhaps a new resistance factor has come into the field which you have not taken into proper account.

It may be that your anxiety to get orders is driving you on from prospect to prospect without time to be thorough—and this anxiety weakens every interview. No one more quickly than the prospect can sense nervousness and lack of confidence in your bearing. These things are sure killers of sales.

If you will get back to fundamentals you will find your difficulty and its solution. Analyze and it will not take long to end your troubles. Analysis is simply standing off and looking at yourself perform—taking your work apart piece by piece to find the weak spot.

Many of the best salesmen of today use analysis charts to find what will make their bad work good, and good work better. They check their work step by step to find if they are weak in approach, or in arousing interest, or in winning conviction, or in creating desire, or in closing. They know when they are handling prospects right and when they are seeing enough prospects.

Such analysis frequently shows up some one objection which has been overlooked and which needs to be anticipated to stop clogging the machinery. No doubt about it, when the skies are bright and the going good you have your buyers' and your prospects' interests in mind and you render a real service. But when that period of "hard luck" hits you, unless you watch your step, your selfish eagerness will cause you to forget that an order is seldom possible unless we think in terms of the buyer's interests.

The man who constantly studies himself and his work will have few poor days or weeks and will come out of any rough going in the shortest time and by the most direct route.

\*From the sales and service bulletin of the F. B. Connelly Co., Billings, Mont.

## Buckingham Palace To Be Equipped with Electrolux Refrigeration



The King's Palace In London.

Permission is given to announce the choice of an Electrolux model H gas refrigerator for installation at Buckingham Palace. This is the first mechanical refrigerator of any kind to be placed in the royal residence, and the choice is considered a feather in the hat of Electrolux, Ltd., of London.

The appliance will be used and tested for a period of three years. At the end of that time, if service is satisfactory, Electrolux, Ltd., will be invested with the royal coat of arms and may display the official inscription, "By Appointment to H. M. The King." In the meantime, according to ancient custom, the installation will not be exploited in any way. In fact, this announcement, special to ELECTRIC REFRIGERATION NEWS, could not be issued to the press within the British Empire.

The model to be installed has a storage capacity of 21 square feet; large provision chamber with meat hooks; five food shelves and eight ice trays each providing ten cubes of ice. Installation is to be made at once and as the royal family is now in residence and Queen Mary is widely known for her domestic qualities, it is expected that she will take a personal interest in this very modern addition to her household equipment.

An order of this kind also opens the opportunity for similarly equipping other royal residences here. The Prince of Wales, Princess Mary, Viscountess Lescelles, and the Duke and Duchess of York all have their separate establishments in town, besides country residences in various parts of England.

### KELVINATOR SAN ANTONIO CO. LISTS OWNERS IN BOOKLET

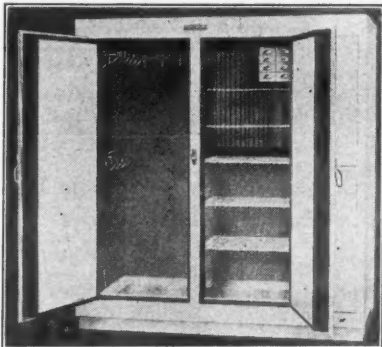
Kelvinator San Antonio Co., San Antonio, Tex., finds that a booklet, giving a partial listing of Kelvinator owners in San Antonio, is of value in interesting new prospects.

The booklet gives the owners in alphabetical order and includes several letters of owners praising the Kelvinator installations. Several cuts showing both the exterior of the homes and the installations are used.

The booklet is included in mailing with two circular letters. One of these letters carries a list of "Do you know?" and gives interesting items of the use of Kelvinator in San Antonio. The other letter gives suggestions for the person who is interested in the wholesomeness of food both in where to buy food and in where to dine.

### Manitowoc G. E. Dealer Co- operates In Better Homes Advertising

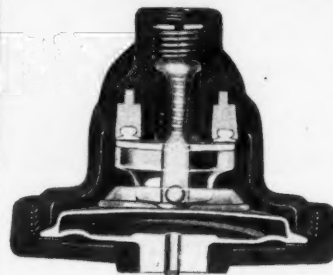
M. L. Tisch, General Electric refrigerator dealer in Manitowoc, Wis., recently co-operated with seven other Manitowoc merchants in running an advertisement suggesting improvements to the home. In addition to the advertisement, photos showing a home before and after modernization were included.



The 21 sq. ft. model which will be installed in the palace.

**E. T. L. Service** for Domestic and Commercial  
Electric Refrigeration  
Testing and experimental laboratory service for manufacturer, distributor, central station  
Test data exclusive property of client  
**ELECTRICAL TESTING LABORATORIES**  
80th Street and East End Avenue, NEW YORK CITY, N. Y.

## THE "THERMOELECTRIC" SWITCH



For **Pressure or  
Temperature  
Control**

In Capillary or Bulb Types

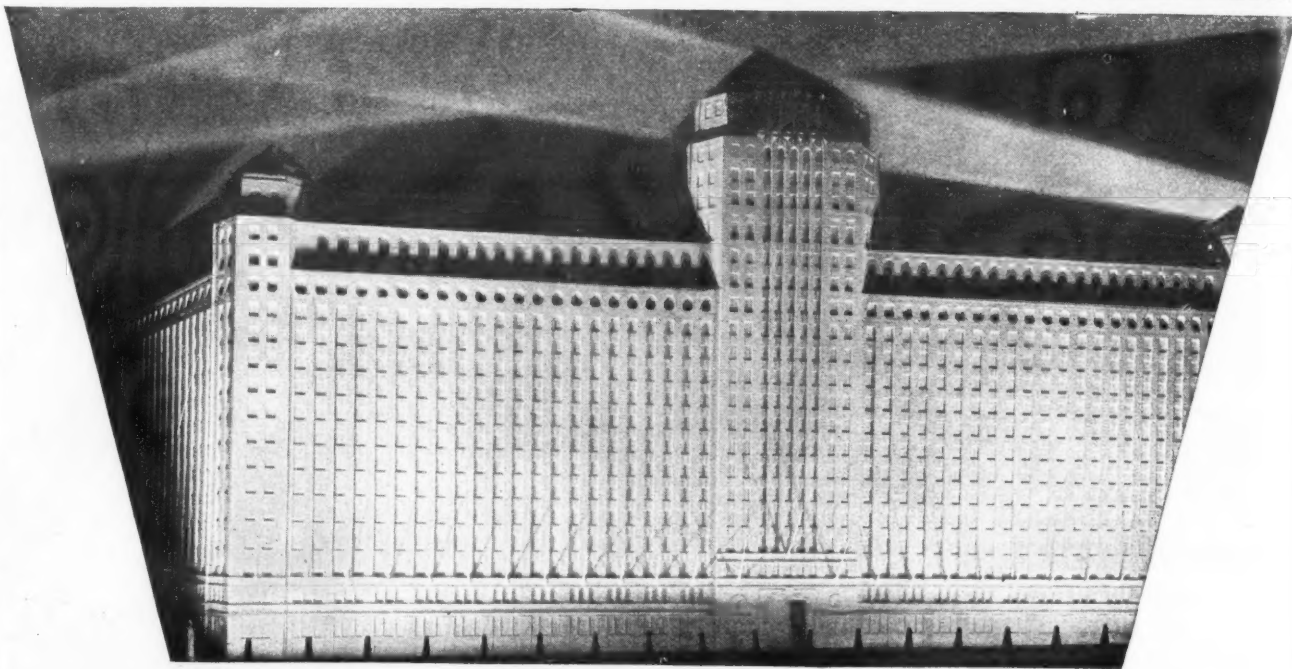
Designed for  
Refrigeration Units, Oil Burners,  
Hot Water Heaters, etc. made  
in adjustable and non-  
adjustable types.

For electric refrigeration practically any range can be supplied with a minimum differential of 6 F°. THERMOELECTRIC SWITCHES can be made to suit any requirement.

Used as standard equipment by many leading manufacturers. Names upon request.

Write for Bulletin

**THE BISHOP & BABCOCK SALES CO.**  
General Offices—4901-4915 Hamilton Ave., Cleveland, Ohio



**LESS TIME BUYING—MORE TIME SELLING**  
is an imperative need in the merchandising of today, because a profitable rate of retail turnover demands an ever-increasing sales resourcefulness and sales pressure. The Merchandise Mart, the world's newest contribution to a great economic trend, will mean definite savings for both producer and distributor; better-sustained sales quotas for the retailer. Q Right now, forward looking manufacturers, wholesalers and importers are reserving space in the new Merchandise Mart—the largest building in the world—now under construction in the heart of the new downtown river district of Chicago and planned for occupancy in Spring, 1930. This Colossus of Marketplaces, logically situated at the travel and traffic crossroads of the nation—near the U. S. Center of Manufactures, Population and Commerce—will inevitably tend to lower selling costs for producer and distributor. This great "Department Store for Stores" will bring the primary market 26 hours closer to the average merchant buyer. It will offer him quicker access to authoritative market information; convenience for emergency buying; opportunity for greater flexibility, timeliness and profit in his merchandising.

# THE MERCHANDISE MART CHICAGO

OFFICES: 215 WEST WACKER DRIVE, CHICAGO

## SULPHUR DIOXIDE

ANHYDROUS  
SULPHUR  
DIOXIDE

Universally used in the production and servicing of refrigerating machines. Prepared for direct charging, with absolute protection afforded by complete laboratory analysis of each cylinder, large or small. Exceptional dryness maintained as an additional safety factor. Ten sizes of cylinders from 2 lb. to 150 lb. capacity.

SO<sub>2</sub>

**ANSUL CHEMICAL COMPANY**  
MARINETTE, WIS.

Canadian Distributor  
**GRASSELLI CHEMICAL CO. Ltd.**  
Toronto—Montreal

Western Subsidiary  
**ANSUL CHEMICAL CO. of Calif.**  
Modesto, Calif.



## BRITISH ASSOCIATION OF REFRIGERATION FOUNDED IN 1900

### Valuable Data Recorded in Printed Proceedings

THE oldest organization devoted to mechanical refrigeration is undoubtedly the British Association of Refrigeration which was founded in 1900. The following data regarding the Association will be of particular interest to engineers. The subjects covered in the printed proceedings which are listed below indicate the constructive work being done by the British organization.

The objects of the association are presented as follows:

"The British Association of Refrigeration was founded early in 1900 under the title of 'The Cold Storage and Ice Association,' for the purpose of aiding the progress of refrigeration in all its applications, and of promoting the general interests of the refrigerating industry.

"The Association is the world's pioneer society of mechanical refrigeration, and has from the outset admitted to candidature for membership all those having an actual connection with refrigeration.

"The enrolment of the widest range of refrigerationists, under the due safeguard of formal election by the Council, has rendered the Association a full and true focus of those who constitute British refrigerating circles.

"Thus the sessional meetings, at which papers of engineering, technical, and trade interest are read and discussed, have reflected opinions representative of all branches of the industry, a convergence of opinion and information of the highest value to all concerned.

"The transactions at the meetings of the Association are published in the form of printed Proceedings, containing the full text and verbatim reports respectively of the papers and discussions."

#### Officers

Officers of the British Association of Refrigeration are: *president*, Lieut.-Col. Lord Dudley Gordon, D. S. O. and J. Raymond, *Hon. Secretary*, Empire House, St. Martin's-le-Grand, London, E.C.1.

Some of the advantages of belonging to the Association are listed as follows:

"The meetings of the association form the one common focus of the representatives of all sections of the refrigerating industry.

"The papers and discussions heard at those meetings form a fund of refrigerating information obtainable in no other way.

"The printed proceedings of the association, free to its members, are a permanent reference to such information.

"The annual banquet and excursions of the Association provide the opportunity of social intercourse with fellow refrigerationists and of the inspection of refrigerating plant and equipment of diverse technical and trade interest.

"Members have the right of bringing before the association questions of public, trade or sectional interest for furtherance under combined action.

"The Association has a North-West Branch, holding sessional meetings in Liverpool and district.

"The Association has two affiliated organizations, viz., the National Federation of Cold Storage and Ice Trades, with headquarters in Derby, and the Victorian Institute of Refrigeration, in Melbourne, Australia.

"The Association has representation on the Council of the London Chamber of Commerce, to which body it is affiliated.

"The Association is a member of the International Institute of Refrigeration, and is in touch with the technical work and records of that Organization, and with the International Congresses of Refrigeration held in connection therewith.

"Members have the facility of consulting reference books and publications on refrigeration at the Reading Room of the Association at Empire House, St. Martin's-le-Grand, London, E.C.1."

#### Publications

The following list of papers, the text and discussion of which are recorded in the Printed Proceedings of the Association, is of especial interest:

Vol. I., No. 1.—Recent Researches in Refrigeration by G. Halliday, Insulation and Insulators; by W. D. A. Bost. Electric Lighting of Cold Stores; by W. B. Eason. Design and Construction of Ice Factories and Cold Stores; by P. Gaskell.

Vol. I., No. 2.—Production of Distilled Water for Ice-making Plants; by Hal Williams. Practical Insulation; by P. F. Kensett.

Vol. II., No. 1.—Insulation; by J. Wemyss Anderson. Cold Storage from a Butcher's Point of View; by W. Brydon Hogg.

Vol. II., No. 2.—Law Relating to the Refrigerating Industry; by E. A. Bell. Cold Stores and Ice Factory at Knutsford; by Hon. Alan de Tatton Egerton, M.P. (president). General Lien in Cold Storage Industry (discussion).

Vol. III., No. 1.—Rationale of Cooling Phenomena; by Dr. W. Hampson. Business Side of Cold Storage; by R. J. Key. General Lien (discussion).

Vol. III., No. 2.—Technical Application of Liquid Air; by Dr. Carl von Linde. Municipal Trading (discussion).

Vol. IV., No. 1.—Refrigeration as Applied to Bacon Curing; by L. M. Douglas. Cold Storage of Hops; by C. Armstrong. Cheap Power for Cold Stores and Ice Factories; by G. D. Hunt.

Vol. IV., No. 2.—Application of Refrigerating Machinery to Dairy Practice; by L. M. Douglas. Proposed Tariff Reform as Affecting the Cold Storage Industry; by E. Kimber. History of the Frozen Meat Industry from its Start to the Present Day; by T. Borthwick (president).

Vol. V., No. 1.—Small Refrigerating Plant for Shops and Private Residences; by E. H. West. Growth and Influence of Refrigeration in Australia; by C. C. Lance. Commercial Agent of N. S. W. Government in Great Britain.

Vol. V., No. 2.—Relative Value of Refrigerating Machines on the Compression System, and the Relative Value of Wet and Dry Air Cooling; by R. Stetefeld. Ice Business in the City of Newark, N. J., U. S. A.; by W. E. Parsons. Resources of New Zealand, with Special Reference to the Dairy Produce and Frozen Meat Industries; by H. C. Cameron. Produce Commissioner of New Zealand Government in Great Britain.

Vol. VI., No. 1.—Manufacture of Ammonia; by C. Page. Notes on Cold Storage and Ice; by Sir Charles Petrie (president).

Vol. VI., No. 2.—Cold Storage Accommodation for Hotels, Butchers, and Provision Dealers; by Hal Williams. Marine Insurance and its Application to the Frozen Meat Industry, parts 1 and 2 (general and special); by A. W. Daughlish.

Vol. VII., No. 1.—Ships' Refrigeration, with Special Reference to Maintaining Even Temperature; by W. G. Brettell. Trials of Refrigerating Machinery at the Dairy Show, 1905, and the British Dairy Farmers' Association's Report Thereon; by A. G. Enock.

Vol. VII., No. 2.—Handling of Frozen Produce; by F. Knowles. Motor Traction in the Cold Storage and Ice Industries; by W. Worby Beaumont. Colonial Poultry and Rabbit Trade; by C. J. Tabor. Notes on the Handling of a large Ice-making Plant; by E. H. E. Bulwer. Insurance of Cold Stores (discussion).

Vol. VIII., No. 1.—Refrigeration as Applied to the Carbonation and Clarification of Beer and other Liquids; by R. W. Webster. The Cold Storage Chain in Canada; by J. A. Ruddick.

Vol. VIII., No. 2.—Some Scientific Problems in the Preservation of Food by Artificial Refrigeration; by C. J. Tabor. Apparatus for Determining the Conductivities of Insulating Materials; by W. D. A. Bost.

Vol. IX., No. 1.—Refrigerating Installations, with Special Reference to the Arrangements Necessary when Narrow Limits of Temperature are Required; by R. Balfour. A System of Units for the Refrigerating Industry; by E. Guillaume.

Vol. IX., No. 2.—Inspection and Distribution of Meat Foods; by F. Knowles. Municipal Cold Storage; by Capt. W. J. Wade. Standardization of Refrigerating Machines; by Gardner T. Voorhees.

Vol. X., No. 1.—Refrigerated Cargoes and their Insurance; by C. E. Brightman. Thermometry in its Application to the Carriage and Storage of Refrigerated Produce; by F. Simpson. The Need of an International Standard of Meat Inspection; by G. Anderson.

Vol. X., No. 2.—Some Suggestions for the Improved Marketing of Frozen Produce; by Major A. E. M. Norton. D. S. O. Cold Storage in South Australia; by C. F. G. McCann. Claims on Refrigerated Produce under Contracts, and their Assessment; by K. W. Elmslie. Cold Storage and the Economic Future of Russia; by Dr. D. Soskice.

Vol. XI., No. 1.—Presidential Address; by J. T. Milton. Notes on Argentine's Refrigerated Export Industries; by P. I. Adie. Ammonia Refrigerating Machinery; Wet v. Dry Compression; by M. S. MacDonald. Investigation of the Inflammability of some Insulating Materials; by R. Balfour.

Vol. XI., No. 2.—Presidential Address; by J. T. Milton. Multiple Effect Compression as Applied to CO<sub>2</sub> Refrigerating Machines; by H. Brier. Cooling of the Liquid CO<sub>2</sub> in Refrigerating Machines; by F. A. Willcox and G. C. Hodson. Excessively Dry Air in Cold Stores; by Wm. D. Sawers. Cold Store Problems of Today.

Vol. XII.—The New "Reform" System of Refrigeration; by H. H. Stockfield. A Costs System for Cold Stores; by Capt. W. J. Wade.

Vol. XIII.—New Zealand Rabbits, with Special Reference to the Trouble of "Yellowed Fat" and other Damage to Refrigerated Goods; by C. J. Tabor. The Application of Refrigeration in the Marketing and Distribution of Fish in Great Britain; by J. M. Tabor. Fruit and Refrigeration; by F. W. J. Moore.

Vol. XIV.—Education and Research in the Refrigeration Industry; by Prof. J. Wemyss Anderson. Some Matters of Interest in the Inspection of Imported Meat; by Dr. W. J. Howarth.

Vol. XV.—Inland Transport of Perishable Produce by Land and Water; by A. R. T. Woods. Some Applications of Chemistry to the Frozen Meat Industry; by A. M. Wright. The Cold Storage Industry in Great Britain, its Present Position and Possibilities; by J. Raymond. Research in Refrigeration; by Sir J. Alfred Ewing. K.C.B., F.R.S. Sheep Freezing in Patagonia; by R. J. Cracknell. The Method and Scope of Scientific and Industrial Research, with Special Reference to the Frozen Meat Industry; by Lieut. A. M. Wright.

Vol. XVI., No. 1.—Scientific Problems of Cold Storage Industries; by W. B. Hardy. Cold Store Operation and Maintenance: A Discussion of the Rise in Costs due to War; by E. L. Rees.

Vol. XVI., No. 2.—The Development of the Cold Storage of the Port of London Authority; by H. J. Deane. Some Profitable Reflections for the Intending Purchaser of Ammonia Refrigerating Plant; by Leig Chew.

Vol. XVII., No. 1.—Road Traction for Refrigerated Transport; by H. M. Dunkerley. The Ethyl Chloride Refrigerating Machine; by Charles Bishop.

Vol. XVII., No. 2.—The Development of Cold Storage at the Avonmouth Docks; by Thomas A. Peace. The Mechanical Handling of Meat and Produce in Cold Storage; by S. G. Calladine.

Vol. XVIII., No. 1.—Presidential Address; by George Goodsir. The Frozen Meat Export Industry of Australia; by J. A. M. Elder. Refrigeration, and the Meat Industry; by W. H. Medcalf.

Vol. XVIII., No. 2.—The Low Temperature Research Station at Cambridge; by L. F. Newman. Notes on the Storage of Perishable Produce, with Special Reference to Eggs; by J. Oldham.

Vol. XIX., No. 1.—Operating and Financial Reports for Cold Stores; by B. T. Aitken.

Vol. XIX., No. 2.—A Discussion, in the Light of Research Improvements, of the Possibilities of Refrigeration in the Fish Trade; by J. M. Tabor. The Preservation of the British Fruit Crop by means of Cold Storage, with Special Reference to Apples; by Hal Williams, M.I.Mech.E., M.I.E.E. The Fourth International Congress of Refrigeration; its Purpose, Scope, and Programme; by J. Raymond, Hon. Secretary-General.

Vol. XX., No. 1.—Ice Cream: A New Field of Refrigerating Enterprise; by Robert G. Reid. Provisional Draft of the Public Health (Meat) Regulations, 1923 (discussion).

Vol. XX., No. 2.—Potentialities of the Russian Produce Trade; by Dr. H. P. Cox, M.R.C.V.S. Fourth International Congress of Refrigeration; List of Papers Presented; Resolutions Passed by Congress.

Vol. XXI., No. 1.—Some Impressions of Refrigeration in Australia; by Sir Philip B. Proctor, K.B.E. Recent Developments in Refrigeration Research; by Dr. Ezer Griffiths. Heat Transmission; by A. G. Clausen.

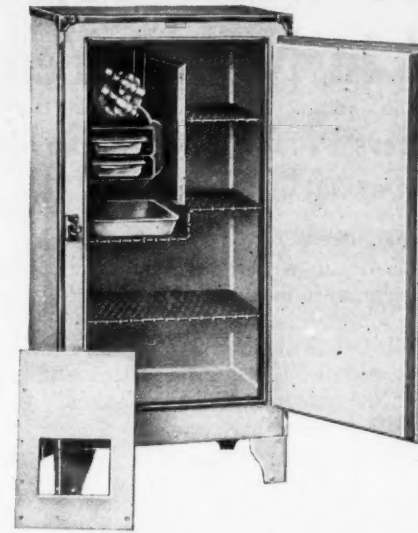
Vol. XXI., No. 2.—The Handling of Frozen Produce in London; by E. F. Farrow. The Importance, from a National and Industrial Point of View, of the Extension of Refrigeration Instruction in the Educational Systems of the Country; by J. Raymond. Small Refrigerating Plants and the Thermodynamical Properties of Refrigerating Liquids; by Dr. Ezer Griffiths and J. H. Awbery, B.A., B.Sc.

Vol. XXII., No. 1.—The Handling and Transport of Fish; by J. M. Tabor. Refrigeration and the Marketing of Perishable Produce; by Austin Chadwick.

Vol. XXII., No. 2.—Modern High Speed Refrigerating Machines; by G. W. Daniels. Milk: Its Hygiene and Technics; by Ben Davies. Science and the Future of the Frozen Meat Industry; by Dr. T. Moran. Ocean Carriage of Fresh Fruit; by Engineer-Commander H. P. Owen.

Vol. XXIII., No. 1.—Cold Storage and the Farmer; by E. L. Barclay. The Mathematical Aspect of Cold Storage Insulation; by G. Vate Pitts, M.Eng. Popular Ice Sales in Great Britain; by F. W. Curtis.

Vol. XXIII., No. 2.—The Refrigerated Transport Question in Europe; by H. Jerne. The Sleeve Valve as a Solution of the High-Speed Compressor Problem; by E. Prestage. The Advancement of the Ice Cream Industry in Great Britain; by Dr. H. L. Lucking.



No. 521—5.2 Cu. Ft. 6½ Sq. Ft. Shelf Space. Removable Front Baffle. Porcelain Drip Pan. 22½" wide, 45" high, 17½" deep.

## Crystal Apartment Refrigerator CABINETS

have made good and are daily showing their superiorities in thousands of apartments with all types of ice machines.

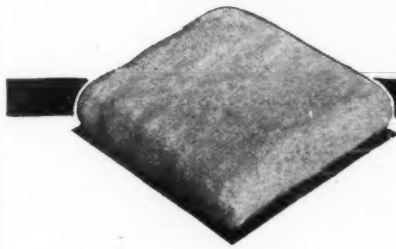
Don't risk the reputation of your machine by any old thing for a cabinet. Crystal cabinets, scientifically constructed—handsome in appearance—add to the good name of your equipment.

### All Steel—Cork Insulated—Duco Finish

Special non-rusting galvanized sheet steel. Walls packed solid with Armstrong's 8/20 pure ground cork. Outside finished in white lacquer—or jade green, deep ivory or turquoise blue to harmonize with colorful kitchens. Inside baked enamel. Edges and corners protected by polished aluminum. Special sizes to meet any requirement. Ask for details.

**CRYSTAL REFRIGERATOR CO. FREMONT NEBRASKA**  
18 Years' Experience Making Steel Refrigerators

# PROVEN FACTS About DRY-ZERO



Dry-Zero is supplied in two forms—blanket and pliable slab. It is not made less than 1½ inches thick. For all insulation uses, from refrigerators to truck bodies. Dry-Zero is the most quickly applied, most perfectly sealing and permanent insulation ever developed.

*The Lightest in Weight  
The Most Permanent Efficiency  
The Greatest Resistance to Heat  
The Greatest Resistance to Moisture*

BECAUSE of the remarkable qualities of Dry-Zero as a heat insulant, it has probably been tested and retested . . . under more conditions . . . and by more authorities . . . than any other insulant in common use.

The facts, when presented alone, are so revolutionary . . . so completely overwhelming in every particular . . . that they are almost unbelievable—yet in every reasonable test, without exception, Dry-Zero has clearly and unmistakably proved its superiority.

Manufacturers of refrigerating units have, under their own eyes, seen definite proof that Dry-Zero is 20% to 35% more efficient than any other insulant known . . . and they have been quick to transform this unchangeable fact into a profitable manufacturing advantage for themselves. They have realized that in more perfect performance lies their future success. The lightness of Dry-Zero (one-seventh the weight of baked cork-board) has added another decisive factor . . . and Dry-Zero's resistance to moisture and its permanence, when installed, has assured them of a longer life of satisfactory service for their units.

No longer can insulation be chosen by opinion. The facts are too overwhelming. We will gladly supply you with a quantity of Dry-Zero sufficient for a test under your own conditions.

DRY-ZERO CORPORATION, CHICAGO, ILLINOIS

# DRY-ZERO



## Predicts 500,000 Water Coolers Will Be Sold in Next 5 Years

Experienced Specialist Offers Practical Suggestions for Installing Commercial Systems

By Louis Barth

ONE of the latest developments in the electric refrigeration industry but by no means the least important, is its adaption to drinking water cooling equipment in industrial and commercial plants.

The need for properly refrigerated drinking water is an established fact, and practically all plants employing a number of people are furnishing their workers with refrigerated drinking water in some form or other. Until a comparatively recent date the only available means was to use ice for this purpose. The cost of ice, together with the necessary costs of labor and waste, is a continuous source of annoyance and yet at its very best can only partly succeed in accomplishing its purpose.

Health conditions in a number of plants have shown conclusively that drinking water furnished to workers at a temperature below 50 degrees can cause serious illness, and the wide fluctuation in the temperature of drinking water where ice is used results in water being either too cold, or, especially at the end of the working day when the ice supply is exhausted, too warm to be fit to use. When drinking water is too warm it will not be used in as sufficient quantities as is advised by medical authorities, thereby defeating the very purposes for which this essential equipment was installed.

The best known method of furnishing mechanically refrigerated water has been heretofore the circulating drinking water system. This plan is only practical where the delivery of water is not required at too widely separated points, and because

of large floor area to be serviced in a majority of shops its adaptation was impractical on account of the high cost of installation and the correspondingly high operating expense.

Bubblers or coolers each individually iced have therefore been used. These are being rapidly replaced by the self-contained electrically refrigerated cooler. In factories or shops where the distance between coolers is not too great, a multiple system whereby a number of outlets are serviced from one compressor can be very advantageously used by adapting practically the same method of installation as is now being used in multiple apartment house refrigeration.

While it is conceded by the writer that the circulating drinking water system has decided advantages, yet one of the latest developments of electric refrigeration adaption to water cooling is the dead end local point cooled method, which will undoubtedly come to the foreground within a very short period of time. The writer adapted this plan with a marked success, and at only a fraction of the cost of a circulating system, in a fourteen story office building.

A 144,000 B. T. U. capacity compressor is used to cool thirteen bubbler outlets in this building, one on each floor, and delivers at a controlled temperature of 50 degrees up to five gallons of properly refrigerated water per hour at each fountain. In this case the compressor was located in the basement of the building and SO<sub>2</sub> lines were run up an elevator shaft directly behind the locations of the fountains. Behind each fountain a water and waste line was run. SO<sub>2</sub> lines were run from the compressor right in line with the water lines and connected at the location of each fountain with a twenty-five pound ice melting capacity SO<sub>2</sub> cooling coil.

This cooling coil was placed into an 18 by 16 by 12 inch box, interior dimensions, into which the water supply line was terminated. This supply line was connected with an 18 foot block tin coil, which was placed directly below the cooling coil in the box, and connected with the fountain outlet water line. The SO<sub>2</sub> line, both gas and liquid, was brought into and connected with the boiler. The box was insulated with three inches of cork, and the top part of the box was made into a close fitting lid to allow coil adjustment should the same be necessary. The cooling coil was set to maintain a constant temperature of 34 degrees in the box. Experience has shown that no frost was formed on the boiler in the box, which was kept perfectly dry.

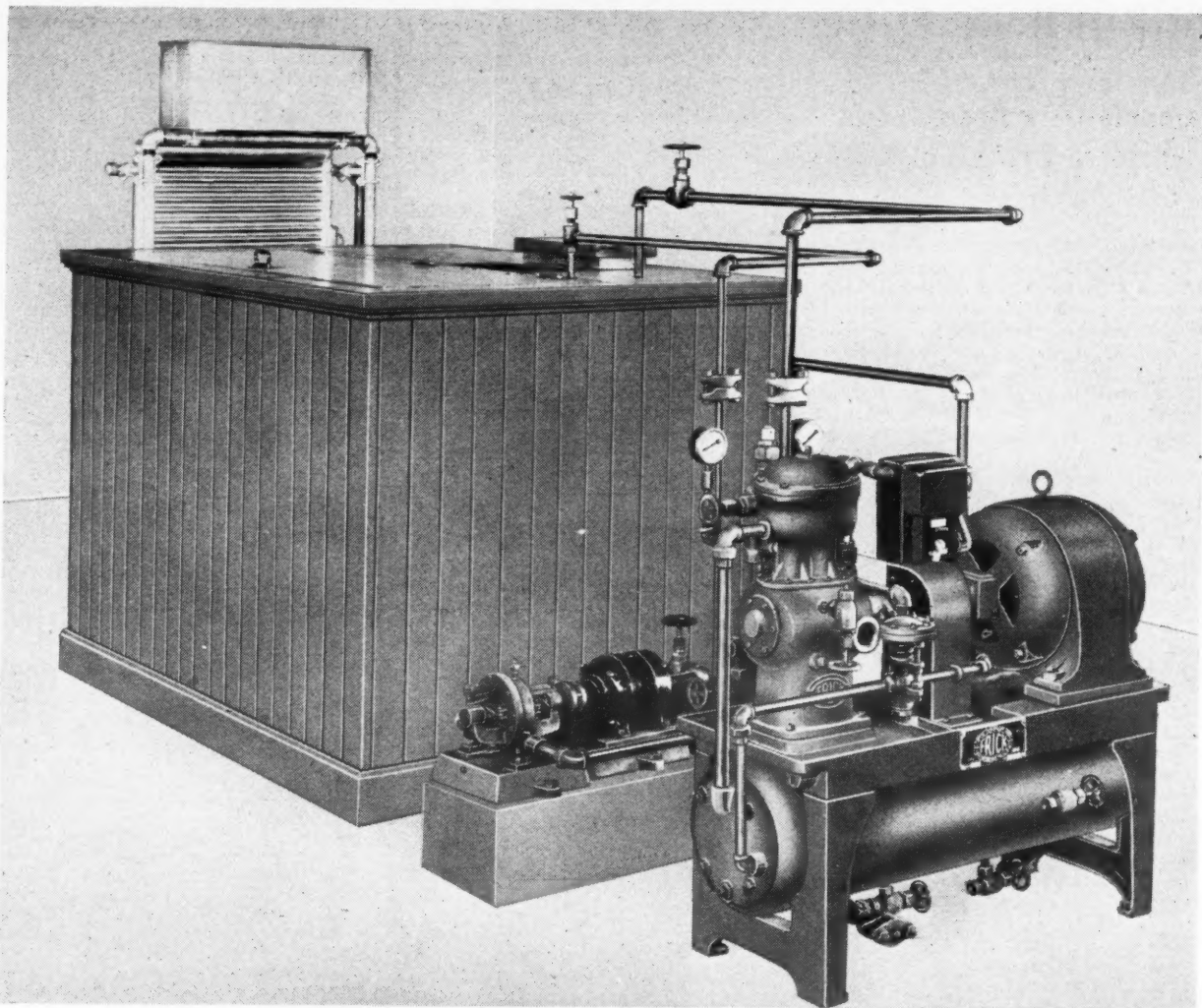
The plan itself is nothing else but an adaption of the old coil and ice cooler system with which most of the readers are undoubtedly familiar. While theories and engineering practices may have been sacrificed, the only excuse that the writer can offer is that the plan works and is very economical to operate. Figures for the last season show that this plant consumed less than 300 KW. per month during the hottest part of the season; service calls have been very few. The total cost of this installation including the running of water and waste lines, the installation of vitreous porcelain wall bubbler fountains, etc., was less than \$2,300.00 and allowed the installer his normal margin of profit. The lowest bid for a circulating system on this particular job exceeded \$3,600.00.

Another multiple system where fourteen coolers of the self-contained type are operated from one compressor of the same size as in the aforementioned installation is also giving excellent service under adverse conditions, such as inlet water at a temperature as high as 78 degrees, and yet not over-taxing the equipment.

It is, of course, essential when these installations are figured and requirements are analyzed, that ample reserve factors are taken into consideration, because it is very easy to over-estimate compressor capacity for this type of work. Line losses, pressure losses and friction may require a great deal more cooling capacity from the compressor than would be estimated in an off-hand manner.

Another outlet for electrically refrigerated water coolers is the bottled water industry. In most cities of any size purified or spring water is being sold in office buildings, and is iced by the seller as part of his service. The charges made for this, upon analysis, have shown that better than 80 per cent of the costs involved in rendering this service is caused by deliveries and servicing. These companies by eliminating ice service are able to operate a great

## Frick Dairy System Combines Rapid Cooling and Milk Storage Facilities



A TUBULAR cooler and storage tank used for cooling and storing milk and equipped with Frick refrigerating equipment is shown in the above photograph. This type of plant cools milk quickly to a low temperature and holds it there in storage.

Brine at a very low temperature flows through the tubular cooler. The brine is stored in a steel tank inside the insulated cabinet; the ammonia coils are submerged in the brine tank. The refrigerating ma-

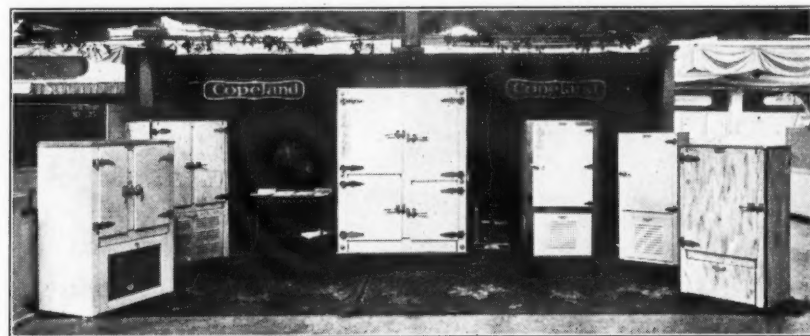
chine is connected to these coils, and as the brine can be dropped to almost any desired temperature without freezing a large amount of cold can be stored in the brine by even a small refrigerating unit.

After the milk has been run over the cooler, the cans are placed in a dry storage space within the cabinet, next to the steel brine tank, which is usually covered with frost. The feature of this kind of plant is its ability to make ice, a number of ice cans being arranged to fit into the

brine tank if desired. The plant can be built to make any quantity of ice wanted, thus providing a supply for household use, or for shipping farm products to market in warm weather.

Gasoline engine drive is used in cases where no electric current is available. Cold water is piped through the upper coils of the tubular cooler and part of the same water is run through the ammonia condenser of the refrigerating unit. If the supply of water is limited, a small cooling tower is used.

## Copeland Domestic Models at Food Show



Strelinger-Copeland Co., Detroit distributors displayed white and colored models in their booth at Convention Hall. See story on page 1.

### Color Effects With Light

Colored illuminating effects in electric refrigeration displays are being successfully used by many dealers to give windows greater attention value where all-white cabinets are being shown.

The public is sold on color. Shades of orange, green and blue and possible combinations of these colors streaking across the front of a white cabinet enliven the display, add to its appeal, and eliminate the necessity of stocking several colored models for display purposes.

## SOUTHERN CALIFORNIA EDISON PREDICTS 100,000 MACHINES ON ITS LINES IN FIVE YEARS

A letter sent out by the Southern California Edison Co., accompanying a Nov. 15 dividend, stated that up to the time of making up the records, four thousand refrigerators had been placed on the company's lines during the year 1928. This made a total of 12,000 kitchen accessories using electricity.

The letter stated that electric ranges and refrigerators were the outstanding items attracting the housewife's attention. Estimate is given that in the next five years 100,000 electric refrigerators and the same number of ranges will be receiving current from that company.

## CAMEO REFRIGERATOR CORP. MOVES TO LARGER QUARTERS

The Cameo Refrigerator Corp., Los Angeles, Calif., on Nov. 15 moved its factory and main office from 973 North Main St. to larger quarters at 2151 East Fifty-first St., Los Angeles. An increase in production is planned by the company and a number of new household and apartment models will be brought out about Dec. 1.

This company has its own porcelain enameling furnaces and has been furnishing cabinets for household and apartment installations on the Pacific Coast and in the Inter-Mountain territory both in all porcelain or porcelain lined wood and metal boxes.

Their line is made exclusively for electric refrigeration and varies in size from three to twenty-one cubic feet food capacity. Special models are being built for a number of distributors and manufacturers in the West to their specifications and with the new plant in operation they will have additional facilities for work of this nature.

## Alexander-Seewald Reports Sales to Hospital, Mill and Apartment

The Alexander-Seewald Co., Atlanta, Ga., distributors of General Electric refrigerators, recently installed special refrigeration equipment in the new Eggleston Memorial Hospital for milk storage. They also report the installation of 19 individual water coolers in the Dunsan Mills at LaGrange and 16 units in the Wilder apartments on St. Charles Ave.

**MCCORD BUILT CONDENSERS**

Type "B" Spiral Fin Continuous Coil MCCORD CONDENSER  
The popular "bee hive" condenser designed to occupy a minimum of space. It is installed so that all air currents created by the fan pass over the coils giving great capacity with a small amount of tubing.

Type "A" Double Row Spiral Fin MCCORD CONDENSER  
Adapted to the larger refrigerating units used commercially and for apartment house installations. This condenser is made up of seamless, bright annealed tubing with continuous corrugated spiral fin that has made McCord condensers leaders in the field.

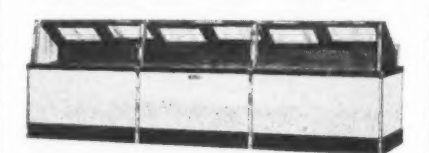
Type "A" Triple Row Continuous Tube MCCORD CONDENSER

**MCCORD RADIATOR & MFG. CO. DETROIT MICH.**

## INTERESTING FEATURES INCORPORATED IN NEW CASE BY BELDING HALL

One of the features of the new display case for electric refrigeration just announced by the Belding Hall Refrigerator Co., Belding, Michigan, is the construction of the cooling unit compartment at the bottom of the case to increase air circulation.

The display case has a white porcelain



exterior with blue porcelain baseboard, is monel metal trimmed, and insulated with two inches of corkboard.

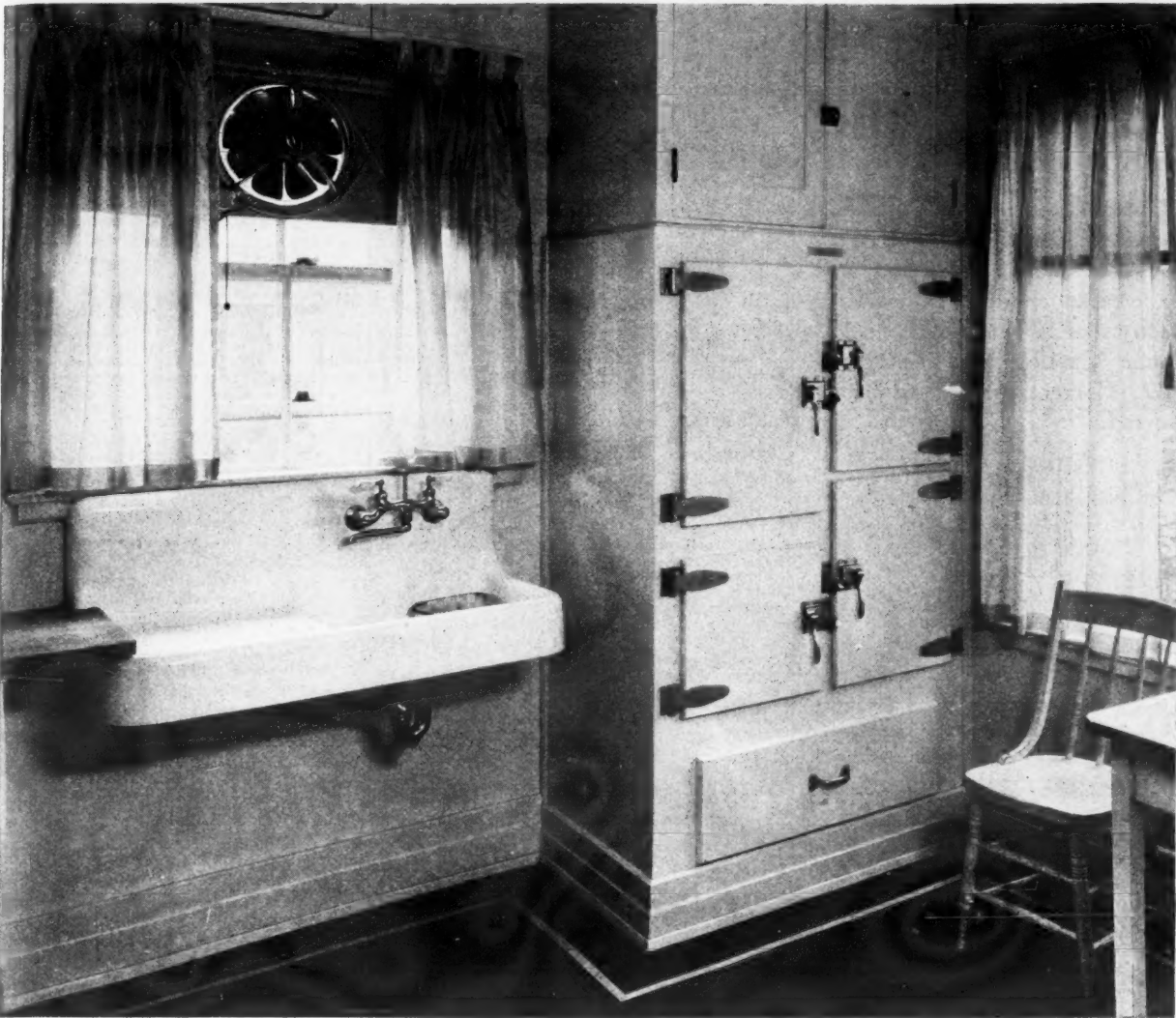
Since the Belding Hall Co., was purchased by the Gibson Refrigerator Co., interests last August, the company has specialized in the developing of the steel and porcelain refrigerators for electric refrigeration. The factory site occupies a space of 780 feet by 60 feet. D. Ward Hamilton is sales engineer and is in charge of the electric refrigeration cabinet division.

## "Sparklets Bubbles" to Go to Sparklets Dealers

Sparklets, Inc., New York, N. Y. has published the first issue of a small bulletin entitled "Sparklets Bubbles." It will be issued at frequent intervals and will be devoted to activities of Sparklet dealers.



## Built-In Jewett Refrigerator Gives More Space And Adds Attractiveness and Convenience



A solid porcelain lined Jewett refrigerator occupies a convenient corner in this kitchen. The built-in feature of the installation adds much to the general attractiveness of the room in being an absolute part of it. The drawer below the refrigerated compartments is handy for keeping food stuffs. The cupboard added above provides storage space which would otherwise be waste.

## Will Associations Be Supplanted By Industry Institutes?

Printers' Ink Sees Advantages in  
New Form of Organization

THE industrial institute and its place in the business world and how it differs from the trade association is discussed in an article by Albert E. Haase in the Nov. 15 issue of *Printers' Ink*.

"What is an institute? Why did it come into existence? Wherein does it differ from a trade association? What does it do?" Mr. Haase asks the questions and then proceeds to quote various authorities in outlining the functions of the new type of industrial organization.

Alvin Dodd, active head of the Wholesale Dry Goods Institute, says: "We must have two developments very much in mind. Two outstanding economic expansions have occurred in our country and these have influenced and altered the entire business structure.

"First, the purchasing power of the people of the United States has grown steadily and rapidly within the last two decades. In terms of fully adjusted dollars, income is more than one-half again as much as it was twenty years ago. Between 1909 and 1928 it has increased more than 54 per cent. That means that the population of this country (rapidly increasing in number itself) has purchased more and more of the products of industry during that time.

"Second, as the standard of living has risen, production has kept pace and sometimes even more than kept pace. Established industries have sprung up almost overnight. Buying habits have changed more swiftly than in any previous period.

"All along the line, industry has tremendously increased its capacity. How far it has been meeting and how far it has actually helped to create a parallel increase in income is a question for the economist. But it is a fact that nearly everywhere we are now prepared to produce somewhat more than we can consume. More products are being manufactured per hour per man and per machine.

"Accelerated production has made the problem of distribution absolutely and without question the greatest problem facing the business world today. The question used to be one of production—now it is how to market, how to sell, what is produced. And, of course, fundamentally, it is even more than that. The most urgent need of business today is the proper co-ordination of production and consumption—brought about through an intelligent readjustment of distribution.

"This problem is one which is too large for almost any individual producer. It is a problem so large that it involves and must involve entire industries. Huge units of business are finding that the serious situa-

tion brought about by industrial expansion is so comprehensive that the efforts of any individual business man, however earnest, cannot achieve a complete and fairly permanent solution.

"This condition," he concludes, "has given rise to the institute."

The secretary of one of the first institutes organized in this country defines the idea in these words: "The term 'institute' was purposely used," he says, "by those organizations which based the reason for their existence, not only on the gathering of statistics and general discussions of trade problems, but which, among other things, did research work in relation to the production of their own goods, in finding new markets for them and in performing services for the public as well as the manufacturer."

The article continues: "The foregoing opinions plainly indicate that the institute idea in business means a co-operative organization which is broader in scope than the old-time trade association. Its scope is broader by virtue of the fact that it is a trade association which is sales-minded. In that statement lies the significance of this article to the audience reached by *Printers' Ink*.

"With the aid of Mr. Dodd, already referred to as the active head of the Wholesale Dry Goods Institute, and with the help of other institutes, it is now possible for us to set down here an outline of the basic work that the genuine institute should perform for its industry.

"1. An institute should study consumer buying habits.

"2. It should measure the market for its industry. It should know what that market can consume, not only as a whole, but according to the geographical breakdowns used in its industry.

"3. It should be able to continually keep its industry informed of the value of the different factors in its distributive channels that take the goods from the factory to the ultimate user.

"4. It should be able to furnish information that would enable a member to value his inventory correctly and to relate his costs to market conditions.

"All of these specific jobs when properly related to each other, as part of a whole, mean that the true institute should have a basic policy which calls for the collection and dissemination of information that enables the individual members of its industry to gauge their own production to meet actual consumption needs. This statement is important. It summarizes the vital difference between the type of trade association that is disappearing and the new modern institute."

There are over thirty industrial institutes in existence today and many other trade associations that are similar in interest to the institute. Listed are the organizations terming themselves institutes:

American Concrete Institute  
American Drop Forge Institute.  
American Dry Milk Institute  
American Institute of Food Distribution  
American Institute of Steel Construction  
American Iron and Steel Institute.  
American Petroleum Institute

American Shovel Institute.  
American Zinc Institute  
Cleanliness Institute  
Coal Mining Institute of America.  
Concrete Reinforcing Steel Institute  
Copper Institute  
Cordage Institute  
Cotton-Textile Institute  
Fire Equipment Manufacturers' Institute.  
Gray Iron Institute  
Hardwood Manufacturers' Institute  
Hosiery Distributors' Institute  
Institute of American Meat Packers  
Institute of Makers of Explosives  
Institute of Carpet Manufacturers  
Lead Institute  
Metal Bed and Spring Bed Institute  
National Institute of Laundering  
National Rice Institute  
Oil Heating Institute  
Rayon Institute  
Rubber Institute  
Steel Barrel Manufacturers' Institute  
Sugar Institute  
Wholesale Dry Goods Institute  
Wool Institute

## New COLOR HARMONIES

**B**ELIEVING that manufacturers will appreciate the opportunity to obtain the results of a complete study of color harmony which takes into consideration manufacturing practicality, economy, sales effect, dealers problems, etc. we are prepared to place at the disposal of reliable manufacturers sketches and details for amazingly practical, and beautiful color harmonies.

Our progressive study of new trends, guided by many years of practical experience, places us in a position to render a service at this time that you will find invaluable. Our recommendations are based on scientific facts and will save any manufacturer the anticipated losses of time and money in experimental finishing as well as material costs. Our message is of particular importance to manufacturers of kitchen equipment and furniture novelties.

Your inquiry will be handled promptly and confidentially. We invite your correspondence concerning this important problem.

## BRADLEY- HURTZ Co.

2626 S. Dearborn St.

Chicago, Illinois



## AUTOMATIC ELECTRIC CONTROLS NON-DETERIORATING MERCURY SWITCHES

Simple — Dependable

**ABSOLUTE**  
ELKHART



Accurate — Safe

**CORPORATION**  
INDIANA

## Manufacturers of ICE CREAM CABINETS

We will build Ice Cream Cabinets to your design  
ready for installation of compressors

REPLACEMENT PARTS FURNISHED

**Motors Metal Mfg. Co.** 5936 Milford Street  
DETROIT :: MICH.

## The Latest Achievement in "Dry-Kold" Refrigerators

### "PERFECTION"

DISPLAY REFRIGERATOR  
FOR ICE OR ELECTRIC REFRIGERATION

PORCELAIN INTERIOR AND EXTERIOR!  
ACTIVE AIR CIRCULATION WITH COMPLETE  
EQUALIZING OF TEMPERATURE, FRONT AND REAR.  
AN EXCLUSIVE DESIGN DEVELOPING THE UTMOST IN  
CORRECT REFRIGERATION.

EXTRA SHELF SPACE!

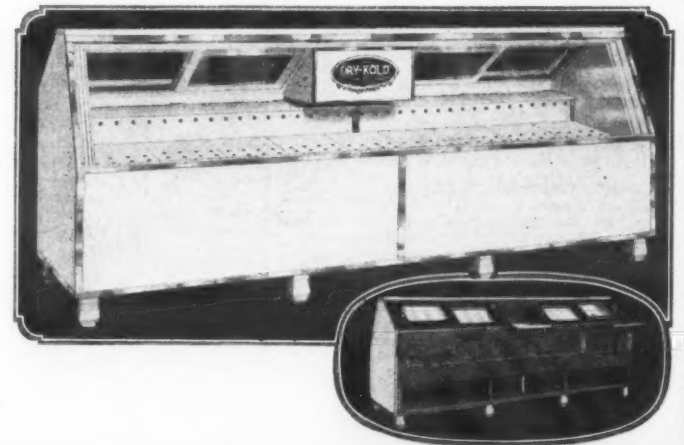
PERFORMANCE NOT EQUALED BY ANY OTHER!  
ESTABLISHES A STANDARD!

THE PRODUCT OF AN OLD ESTABLISHED  
MANUFACTURER OF THE HIGHEST GRADE,  
CORRECT REFRIGERATORS.

SEND FOR COMPLETE CATALOG.

**The "Dry-Kold" Refrigerator Co.**

NILES, MICHIGAN



## KULAIR COMMERCIAL CONDENSING UNITS

For Use With Any Practical Cooling Unit

Low, Medium or High Speed  
Multiple or Single Unit Hookup

Sulphur Dioxide or Methyl Chloride

A sensible policy product and price  
Awaits your inquiry  
Write for it

**KULAIR DIVISION  
FRANKLIN AIR COMPRESSOR CORPORATION**  
NORRISTOWN, PA.



No. 3000 Air Cooled 9942 BTU per hr.  
Smaller Sizes to 1/4 Horse Power.



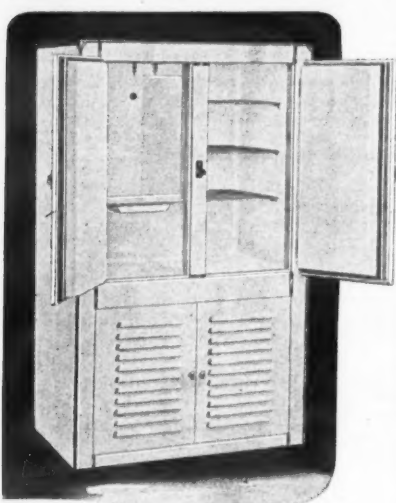
# Directory of Manufacturers Of Refrigerator Cabinets for Use with Mechanical Systems

**Explanatory Note**—This directory is one of a series of classifications of electric and gas refrigeration products. Manufacturers of equipment for dairy and ice cream applications were listed in the October 10 issue. Companies making electric and gas refrigeration machines, with specifications of systems, were given in the issue of November 7. Cabinets for domestic and commercial applications are detailed in this issue. Accessories, parts and materials will be featured in the coming issue, December 5. Production and service tools will be treated similarly December 19. A complete directory of all classifications will appear in the Annual Catalog and Directory Number Jan. 2, 1929. Corrections and additions to the lists are requested.

Commercial applications are detailed in this issue. Accessories, parts and materials will be featured in the coming issue, December 5. Production and service tools will be treated similarly December 19. A complete directory of all classifications will appear in the Annual Catalog and Directory Number Jan. 2, 1929. Corrections and additions to the lists are requested.

## ALASKA REFRIGERATOR CO.

Muskegon, Mich.  
Willard Reid, pres.; J. L. Gillard, vice-pres., gen. mgr. and treas.; F. J. Emlaw, secy.; J. L. Collin, sales mgr.  
Trade name—ALASKA.



### Domestic Refrigerators

Food capacities from 4 to 16 cu. ft.  
Shelf areas from 4 to 25 sq. ft.  
Number of standard sizes for ice only 50.  
Capacities (ice) from 25 to 150 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain, lacquer, and enamel.  
(interior) porcelain and enamel.  
Construction—metal. Insulation—corkboard.

## ALBATROSS STEEL EQUIPMENT CO.

P. O. Drawer A, Sawtelle, Calif.  
R. G. E. Cornish, pres.; J. Pilaar, sales engr.  
Trade name—CHILLWELL.  
Domestic Refrigerators  
No. of standard sizes designed especially for electric refrigeration 3.  
Food capacities from 4.4 to 6 cu. ft.  
Shelf areas from 4.2 to 5.8 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) to order (interior) white enamel.  
Construction—steel. Insulation—corkboard.

## AMERICAN ICE MACHINE CO.

Glendale, Calif.  
L. P. Zahn, pres.; L. E. Zahn, vice-pres.; E. Z. Belden, secy.; Frank Chase, adv. and sales promotion mgr.; E. W. Brown, chief engr.; George Cooper, pur. agt.  
Trade name—SNOWBIRD, AMERICAN.  
Manufacturers of domestic cabinets for electric refrigeration.

## AMERICAN REFRIGERATOR CORP.

Peru, Ind.  
H. L. Grimm, vice-pres. and sales mgr.  
Trade name—AMERICAN.

## ANDERSON SHOWCASE MFG. CO.

321 N. E. Filmore St., Minneapolis, Minn.  
Trade name—ANDERSON.  
Domestic Refrigerators  
Following data applies only to models designed especially for electric refrigeration.  
Finish (interior) enamel. Insulation—corkboard.  
Construction—wood.

Commercial Refrigerators  
Mfgs. of wall coolers, walk-in coolers, refrigerator display cases, and freezer display cases for food stores.

## ARGUS PRODUCTS CO.

174 E. Water, Portland, Oreg.

## ARLINGTON REFRIGERATOR CO.

Arlington, Vt.  
J. P. Munn, pres.; C. M. Rochester, treas.; A. M. Johnstone, secy. and mgr.; B. F. Leonard, sales mgr.  
Trade name—ARLINGTON, ARCO, ARCO-STONE.

## BALDWIN REFRIGERATOR CO.

Burlington, Vt.  
G. A. Hall, pres.; E. E. Smith, secy. and gen. mgr.; H. T. Rutter, treas.

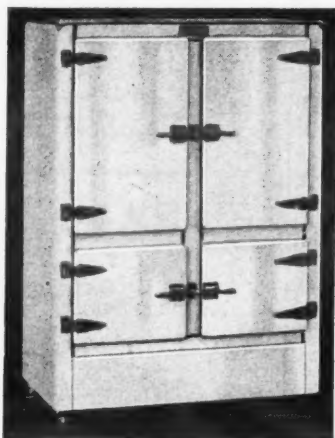
## BANTA REFRIGERATOR CO.

Clefield, Pa.  
L. A. Banta, pres.; W. J. Walker, vice-pres., gen. mgr. and sales mgr.; J. L. Irwin, secy.; F. B. Kerr, treas.; A. L. Starkey, chief engr.; G. F. Banta, prod. mgr.; W. B. McBride, pur. agt.  
Trade name—BANTA.

Commercial Refrigerators  
Mfgs. of wall coolers, walk-in coolers, refrigerator display cases, and freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, salads for food service applications.  
Special stock designs for florists.

## BELDING HALL CO.

Belding, Mich.  
R. H. Hall, gen. mgr.; R. E. Wilson, adv. mgr.; D. Ward Hamilton, sales engr.  
Trade name—BELDING-HALL.



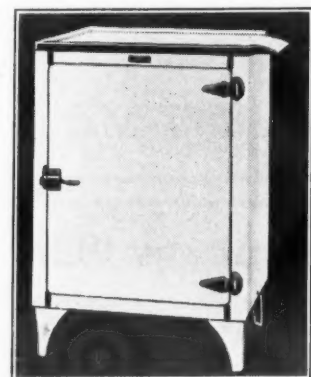
### Domestic Refrigerators

Food capacities from 5 to 15 cu. ft.  
Shelf areas from 6 to 22 sq. ft.  
Number of standard sizes for ice only 49.  
Capacities (ice) from 30 to 200 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain, lacquer, and wood.  
(interior) porcelain and enamel.  
Construction—metal. Insulation—corkboard.  
Hardware by—Grand Rapids Brass Co.  
Gaskets by—Bosley.

Commercial Refrigerators  
Mfgs. of walk-in coolers, refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods for food service applications.

## BENJAMIN ELECTRIC MFG. CO.

120 S. Sangamon St., Chicago, Ill.  
R. B. Benjamin, pres.; J. H. Fall, Jr., vice-pres. and treas.; W. D. Steele, vice-pres. and secy.; G. B. Weber, mgr. ref. sales; E. A. Drake, works mgr.; E. D. Pellegrin, engr. ref. dept.; R. W. Staud, mgr. adv. and sales pro.  
Trade name—CRYSTEEL.

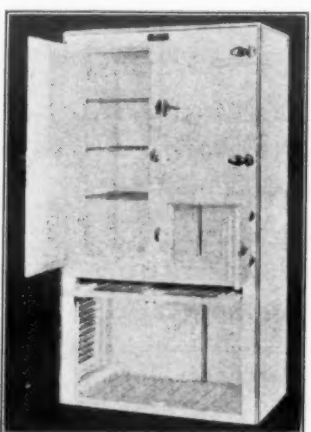


### Domestic Refrigerators

Food capacities from 5 to 18.5 cu. ft.  
Shelf areas from 7.25 to 25.1 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) enamel, porcelain.  
(interior) enamel, porcelain.  
Construction—metal or wood.  
Insulation—corkboard.

## BOHN REFRIGERATOR CO.

1550 University Ave., St. Paul, Minn.  
G. C. Bohn, pres.; H. H. Bohn, vice-pres.; R. H. Ames, secy. and treas.; R. G. McCord, sales mgr.; A. M. Hoff, works mgr.; F. O. Schneider, pur. agt.  
Trade name—BOHN.



### Domestic Refrigerators

No. of standard sizes designed especially for electric refrigeration 7.  
Food capacities from 5 to 12 cu. ft.  
Shelf areas from 6.6 to 15.5 sq. ft.  
Following data applies only to models designed for electric refrigeration.  
Finish (exterior) porcelain. (interior) porcelain.  
Construction—steel. Insulation—flaxinum.

## BOLTON & HAY

216 Second St., Des Moines, Iowa.  
Manufacturers of commercial refrigerators for electric refrigeration.

## BOYER REFRIGERATOR CO.

2217 Locust St., St. Louis, Mo.

## R. H. BOZMAN & BROS.

1046 Granby St., Baltimore, Md.  
Manufacturers of commercial refrigerators for electric refrigeration.

## BROOKS CABINET CO., INC.

1028 West 27th St., Norfolk, Va.  
C. H. Brooks, pres.  
Trade name—BROOKS.

Manufacturers of domestic and commercial refrigerators for electric refrigeration.

## BUYERS DOOR & MFG. CO., LTD.

374 Pacific Ave., Toronto, Ontario, Canada.  
A. A. Wright, pres.; J. S. Bond, vice pres.  
Trade name—ARTIC.

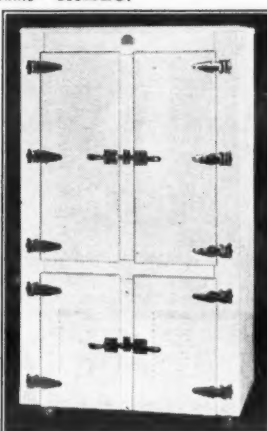
Manufacturers of commercial refrigerators.

## CALIFORNIA BUTCHERS SUPPLY CO.

927 S. Los Angeles St., Los Angeles, Calif.  
Name changed Apr. 1, 1928 to Commercial Refrigerator Mfg. Co., E. 59th St., Los Angeles, Calif.

## CAMEO REFRIGERATOR CORP.

973 N. Main St., Los Angeles, Calif.  
J. T. Penton, pres.; R. B. Ahlswede, vice-pres.; N. W. Neice, secy. and sales mgr.; E. E. Radeck, treas. and gen. mgr.; R. N. Walters, pur. agt.  
Trade name—CAMEO.



### Domestic Refrigerators

No. of standard sizes designed especially for electric refrigeration 7.  
Food capacities from 3 to 8 cu. ft.  
Shelf areas from 6 to 12 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) enamel, porcelain.  
(interior) enamel, porcelain.  
Construction—wood, metal.  
Insulation—corkboard.  
Hardware by—Grand Rapids Brass Co., National Lock Co.  
Gaskets by—E. J. Wirfs Org., W. J. Dennis.

## CAMPBELL REFRIGERATOR CO.

3200 Auer Ave., Milwaukee, Wis.  
R. F. Campbell, pres., gen. mgr. and prod. mgr.; George Vierheiling, vice-pres.; G. C. Kohlhardt, secy., treas. and adv. mgr.  
Trade name—CAMPBELL.



### Domestic Refrigerators

All models built to order only.  
Commercial Refrigerators  
Mfgs. of wall coolers, walk-in coolers, refrigerator display cases, freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, salads for food service applications.  
Special stock designs for diet kitchens.

## CHALLENGE REFRIGERATOR CO.

Grand Haven, Mich.  
H. F. Harbeck, pres.; W. H. Harbeck, vice-pres.; B. F. Harbeck, secy. and treas.  
Trade name—CHALLENGE.

Domestic Refrigerators  
No. of standard sizes designed especially for electric refrigeration 4.  
Food capacities from 6.5 to 16.07 cu. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain. (interior) porcelain.  
Insulation—corkboard and Cabot quilt.

Commercial Refrigerators  
Manufacturers of wall coolers for food stores and food service applications.

## CHAMPION REFRIGERATOR CO., INC.

206 Lexington Ave., New York, N. Y.  
Trade name—CHAMPION.

Domestic Refrigerators  
Food capacities from 5 to 10 cu. ft.  
Number of standard sizes for ice only 5.  
Capacities (ice) from 50 to 150 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) enamel, porcelain.  
(interior) enamel, porcelain.  
Construction—metal. Insulation—corkboard.  
Hardware by—Grand Rapids Brass Co.  
Gaskets by—E. J. Wirfs Org.

## CINCINNATI BUTCHERS SUPPLY CO.

Cincinnati, Ohio.  
Manufacturers of commercial and domestic refrigerators.

## CINCINNATI REFRIGERATOR & FIXTURE WORKS

Cincinnati, Ohio.  
Trade name—KOLD-O-MATIC.

## COLD STORAGE REFRIGERATOR CO.

Eau Claire, Wis.

## COLONIAL MANTEL & REFRIGERATOR CO.

494 Dumont Ave., Brooklyn, N. Y.

## COMMERCIAL AUTO BODY CO.

5401 N. Bulmer Ave., St. Louis, Mo.  
G. R. Lindahl, gen. sales mgr.

## COMMERCIAL REFRIGERATOR MFG. CO.

E. 59th St., Los Angeles, Calif.  
Trade name—SUPER-BILT, SUPER-COLD.  
Commercial Refrigerators  
Mfgs. of wall coolers, walk-in coolers and refrigerator display cases for food stores.

## JOS. CROCKER REFRIGERATOR CO.

Sheboygan, Wis.

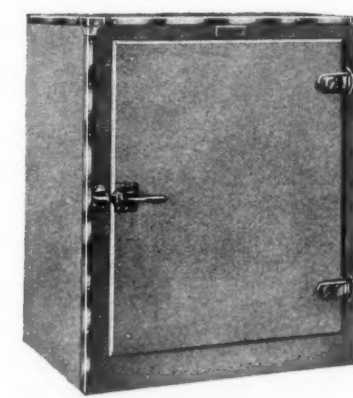
## CROSLY RADIO CORP.

3401 Colerain Ave., Cincinnati, Ohio.  
Powel Crosley, Jr., pres.; Lewis Crosley, gen. mgr. and prod. mgr.; H. C. Abbot, sales mgr.; C. F. Propson, adv. mgr.; Ralph Langley, chief engr.; W. A. Aiken, pur. agt.  
Trade name—ICYBALL.

Two sizes in 4 and 10 cu. ft. food capacities for use with absorption type unit. Cabinets are of iron finished in enamel.

## CRYSTAL REFRIGERATOR CO.

Fremont, Nebr.  
Frank Hammond, pres.; E. R. Hammond, secy., sales and adv. mgr.; R. E. Hammond, treas., prod. mgr. and pur. agt.  
Trade name—CRYSTAL.



### Domestic Refrigerators

No. of standard sizes designed especially for electric refrigeration 8.  
Food capacities from 5.2 to 6.5 cu. ft.  
Shelf areas from 6.5 to 9.5 sq. ft.  
Number of standard sizes for ice only 29.  
Capacities (ice) from 50 to 100 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) enamel. (interior) enamel.  
Construction—metal. Insulation—cork.  
Hardware by—Grand Rapids Brass Co.  
Gaskets by—E. J. Wirfs and Miller Co.

Commercial Refrigerators  
Mfgs. of refrigerator display cases for food stores.

## DETROIT BUTCHERS SUPPLY CO.

1455 Gratiot Ave., Detroit, Mich.  
C. C. Valade, pres.

## Trade name—DIAMOND BRAND.

Commercial Refrigerators  
Manufacturers of refrigerator display cases, and freezer display cases for food stores.

## DILLINGHAM MFG. CO.

Sheboygan, Wis.  
Trade name—ICEBERG.

Manufacturers of domestic refrigerators for electric refrigeration.

## DOWNING MFG. CO.

Downing, Wis.  
D. C. Coolidge, pres.; L. B. Best, vice-pres.; R. A. Cleveland, secy. and treas.

## Trade name—DOWNING.



### Commercial Refrigerators

Mfgs. of walk-in coolers, refrigerator display cases, and freezer display cases for food stores.

## DRAYER & HANSON INC.

738 E. Pico St., Los Angeles, Calif.  
H. E. Drayer, pres.; P. E. McKenna, secy.

Domestic Refrigerators  
No. of standard sizes designed especially for electric refrigeration 3.  
Food capacities from 6.2 to 20.5 cu. ft.  
Shelf areas from 9 to 27 1/2 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) lacquer. (interior) porcelain.  
Construction—wood & metal.  
Insulation—Corkboard.

Commercial Refrigerators  
Mfgs. of wall coolers, and walk-in coolers for food stores.  
Mfgs. of refrigerators for pantry or kitchen service and short orders for food service applications.

## DRY-KOLD REFRIGERATOR CO.

Niles, Mich.  
W. F. Harrah, pres.; W. C. Whitcher, treas. and gen. mgr.  
Trade name—DRY-KOLD.

Commercial Refrigerators  
Mfgs. of coolers, refrigerator display cases and freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.

## DUBOIS REFRIGERATOR CO., INC.

133 E. 16th St., New York, N. Y.

## EDDY & SONS

339 Adams, Boston, Mass.

## H. EHRlich & SONS MFG. CO.

St. Joseph, Mo.  
Commercial Refrigerators  
Mfgs. refrigerator display cases and freezer display cases for food stores.

## ELKINS REFRIGERATOR & FIXTURE CO.

5201 Denison Ave., Cleveland, Ohio.  
A. Mallory, secy.

## Trade name—ELKINS.

Commercial Refrigerators  
Mfgs. of wall coolers, walk-in coolers, refrigerator display cases and freezer display cases for food stores.  
Special stock designs for florist shops.

## ERIE ART METAL CO.

Erie, Pa.  
W. H. Knobloch, pres.  
Trade name—DAN-DEE.  
Manufacturers of domestic refrigerators for electric refrigeration.

## ESCO CABINET CO.

140 E. Market St., Westchester, Pa.  
H. E. Cann, M. B. Cann, officers and owners; Richard Markley, chief engr.  
Trade name—ESCO.

Manufacturers of milk cooling cabinets for use with electric refrigeration.

## EUREKA REFRIGERATOR CO., LTD.

Owen Sound, Ontario, Canada.  
J. E. Keenan, pres.; J. C. Keenan, Sr., vice-pres.; W. P. Keenan, secy. and treas.; R. F. Keenan, gen. sales, adv. and prod. mgr.

Commercial Refrigerators  
Mfgs. of wall coolers, walk-in coolers, refrigerator display cases and freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.

## C. F. FABIEN REFRIGERATOR CO.

Montreal, Quebec, Canada.  
Manufacturers of domestic and commercial refrigerators.

## FAIRFIELD MFG. CO.

82 St. Johns St., Portland, Maine.  
Trade name—EVERCOLD.

Manufacturers of domestic and commercial refrigerators for electric refrigeration.

## FEDERAL ASBESTOS & CORK INSULATION CO.

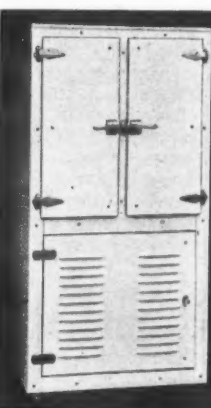
931, 30th St., Milwaukee, Wis.  
Charles Dieringer, pres.

## Trade name—FEDERAL.

Manufacturers of domestic and commercial refrigerators for electric refrigeration.

## FERN-GLOVER REFRIGERATOR CORP.

Cincinnati, Ohio.  
B. L. Fern, pres.  
Trade name—LIFELONG.

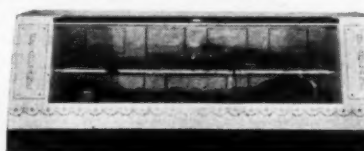


### Domestic Refrigerators

No. of standard sizes designed especially for electric refrigeration 8.  
Food capacities from 5.3 to 15 cu. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain. (interior) porcelain.  
Construction—wood. Insulation—sugar cane fibre.

## ED. FRIEDRICH

1117 E. Commerce St., San Antonio, Texas.  
Edward Friedrich, pres.; R. H. Friedrich, gen. mgr.; G. E. Friedrich, adv. and sales mgr.  
Trade name—ED. FRIEDRICH.



### Commercial Refrigerators

Mfgs. of wall coolers, walk-in coolers, refrigerator display cases and freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.



# Directory of Manufacturers Of Refrigerator Cabinets (Continued)

FRESNO SHOW CASE & FIXTURE CO.  
1805 Anna, Fresno, Calif.

FRIGIDAIRE CORP.  
Dayton, Ohio.

E. G. Biechler, pres. and gen. mgr.; R. D. Funkhouser, vice-pres.; C. F. Kettering, vice-pres.; C. A. Copp, asst. to pres.; J. A. Harlan, distributor sales mgr.; R. F. Callaway, branch sales mgr.; E. D. Doty, adv. mgr.; L. S. Keilholtz, chief engr.; Thos. B. Fordham, work mgr.

Trade name—FRIGIDAIRE.  
**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 25.  
Food capacities from 5 to 18 cu. ft.  
Shelf areas from 8 to 27 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain, lacquer.  
(interior) porcelain.  
Insulation—cork.

GARLAND REFRIGERATOR CO., INC.  
101 Park Ave., New York, N. Y.

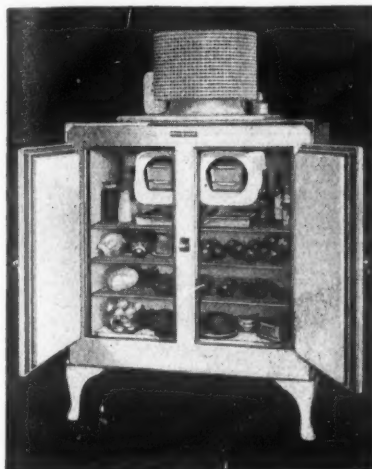
M. L. Garland, pres.; C. F. Garland, secy.; B. F. Garland, treas.

Trade name—GARLAND.  
Manufacturers of commercial refrigerators.

GENERAL ELECTRIC CO.  
Electric Refrigeration Dept.  
Hanna Bldg., Cleveland, Ohio.

Gerard Swope, pres.; T. K. Quinn, gen. mgr.; W. W. Trench, secy.; R. S. Murray, treas.; P. B. Zimmerman, sales mgr.; L. R. Edwards, adv. mgr.

Trade name—GENERAL ELECTRIC.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 6.  
Food capacities from 3.5 to 18 cu. ft.  
Shelf areas from 6.5 to 29.5 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain or lacquer.  
(interior) porcelain.  
Construction—wood and metal.  
Insulation—sheet cork or equivalent.

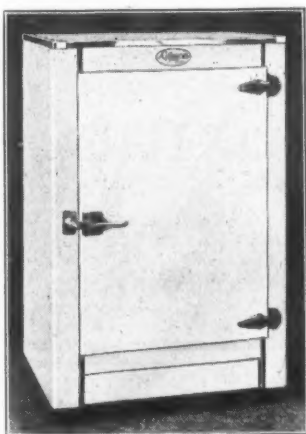
**Commercial Refrigerators**  
Mfgs. of refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service and sea foods for food service applications.

GENERAL STEEL WARES, LTD.  
199 River St., Toronto, Ontario, Canada.  
Trade name—S. M. P.  
Manufacturers of refrigerators for homes and apartments.

GIBSON REFRIGERATOR CO.  
Greenville, Mich.

C. J. Gibson, pres.; John Lewis, vice-pres., gen. mgr. and sales mgr.; F. S. Gibson, Jr., secy. and treas.; A. C. Baldwin, adv. mgr.; William King, chief engr.; Andrew Anderson, prod. mgr.; Howard Wilson, purch. agt.

Trade name—GIBSON.

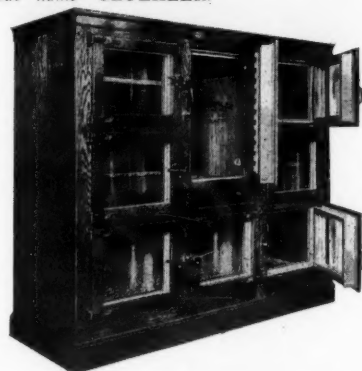


**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 24.  
Food capacities from 3.5 to 35 cu. ft.  
Number of standard sizes for ice only 48.  
Capacities (ice) from 25 to 400 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain, lacquer.  
(interior) porcelain, enamel.  
Construction—metal. Insulation—corkboard.  
Hardware by—Grand Rapids Brass Co.  
Gaskets by—E. J. Wirfs Org.

**Commercial Refrigerators**  
Mfgs. of wall coolers, and refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.

BERNARD GLOEKLER CO.  
1627 Penn Ave., Pittsburgh, Pa.  
J. E. Gloekler, pres. and treas.; K. J. Gloekler, vice-pres. and treas.; S. H. McClure, sales mgr.; H. W. Lindsay, chief engr.; J. F. Kries, pur. agt.

Trade name—GLOEKLER.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 6.  
Food capacities from 5 to 15 cu. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain. (interior) lacquer.  
Construction—metal. Insulation—sheet cork.  
Hardware by—own.

**Commercial Refrigerators**  
Mfgs. of wall coolers and refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for service applications.

GURNEY REFRIGERATOR CO.  
Fond Du Lac, Wis.

Trade name—ATHERMOS, ROYAL GURNEY  
**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 13.  
Food capacities from 5.7 to 60 cu. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) wood and porcelain.  
(interior) enamel and porcelain.  
Construction—wood and metal.  
Insulation—corkboard.

GUSTAV GRUENDLER MFG. CO., INC.  
814 N. Broadway, St. Louis, Mo.

E. P. Voigt, asst. sales mgr.  
Trade name—GRUENDLER.  
**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers, refrigerator display cases and freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service and short orders for food service applications.  
Special stock designs for florists shops.

HALL REFRIGERATOR CO.  
Belding, Mich.

HARDER REFRIGERATOR CORP.  
Cobleskill, N. Y.

E. S. Ryder, pres.; F. H. Ryder, vice-pres.; G. R. Ryder, secy. and treas.; H. L. Merrill, sales mgr.

Trade name—KLEEN-KOLD, HUDSON.  
Manufacturers of domestic refrigerators.  
HASKELITE MFG. CORP.  
120 S. LaSalle St., Chicago, Ill.  
George R. Meyerwood, pres.; James R. Fitzpatrick, vice-pres. and secy.; Howard B. Dutton, asst. secy. and treas.

Trade name—PLYMETL.  
Formerly manufacturers of Plymtl refrigerators; now making Plymtl panels and monolithic cork for refrigerator assembly plants.

HEINTZ MFG. CO.  
Font & Olney Aves., Philadelphia, Pa.

L. I. Heintz, pres.; R. P. Farrington, vice-pres. and treas.; F. W. Thacher, vice-pres.; A. L. Lambert, secy.; W. J. Bryan, sales mgr.; J. J. Fiechter, works mgr.; W. C. DeMaris, office mgr.

Trade name—STEEL PREST.  
**Domestic Refrigerators**  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) lacquer (interior) enamel.  
Construction—steel. Insulation—cork and celotex.

HEINZ & MUNSCHAUER  
Superior & Randall, Buffalo, N. Y.

HERRICK REFRIGERATOR & COLD STORAGE CO.  
Waterloo, Iowa.

Nathan Northey, pres.; E. N. Northey, vice-pres. and adv. mgr.; H. G. Northey, gen. mgr.; W. E. Ogle, treas. and pur. agt.; C. A. La Borne, chief engr.; C. N. Ogle, prod. mgr.

Trade name—HERRICK.



**Domestic Refrigerators**  
Food capacities from 8.8 to 65.2 cu. ft.  
Shelf areas from 8.2 to 37.6 sq. ft.  
Number of standard sizes for ice only 40.  
Capacities (ice) from 50 to 550 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) oak, enamel.  
(interior) Vitrolite, porcelain, enamel.  
Construction—wood.  
Insulation—mineral wool.  
Hardware by—Dent Hardware Co. and Winters & Crampton.  
Gaskets by—E. J. Wirfs Org. and Bosley.

**Commercial Refrigerators**  
Mfgs. of refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders and salads for food service applications.  
Special stock designs for bottled goods and bakeries.

C. V. HILL CO., INC.  
360 Pennington Ave., Trenton, N. J.  
C. V. Hill, Jr., adv. mgr.  
Trade name—DRY-COLD.  
Manufacturers to order only of commercial refrigerators.

HOLCOMB & HOKE MFG. CO.  
1545 Van Buren Ave., Indianapolis, Ind.

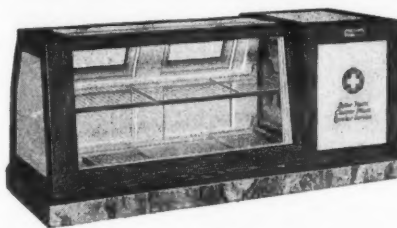
L. D. Lashbrook, adv. mgr.  
Trade name—HOLCOMB & HOKE.  
**Commercial Refrigerators**  
Mfgs. of refrigerator display cases and freezer display cases for food stores.

HOLDERLE BROS., INC.  
339 Exchange, Rochester, N. Y.  
Manufacturers of commercial refrigerators for electric refrigeration.

HOME PRODUCTS CORP.  
Jackson, Mich.

G. H. Hannum, pres.; H. C. Castle, vice-pres.; C. B. Castle, secy. and treas.; G. A. Christman, asst. gen. mgr. H. A. Matthews, sales mgr.  
Trade name—WHITE FROST CASTLE.  
Manufacturers of domestic refrigerators for electric refrigeration.

HARRY L. HUSSMAN REFRIGERATOR CO.  
911 N. Broadway, St. Louis, Mo.  
H. L. Hussman, pres., manag. dir. and treas.; D. T. Tuffe, vice-pres.; P. E. Weeke, secy.; W. L. Nanson, asst. secy.



**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers, refrigerator display cases and freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service and salads for food service applications.

ICICLE REFRIGERATOR CO.  
957 W. Main St., Los Angeles, Calif.

ILLINOIS REFRIGERATOR CO.  
Morrison, Ill.

E. A. Smith, pres.; F. L. Smith, vice-pres. and gen. mgr.; H. J. Kendall, secy. and pur. agt.; H. L. Kirberg, treas.; A. T. Freer, sales and adv. mgr.; W. H. Hamilton, chief engr.; A. W. Collins, prod. mgr.

Trade name—AUTOMATIC.  
**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 14.  
Gross capacities from 4.8 to 20 cu. ft.  
Shelf areas from 6.5 to 28.5 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) lacquer, porcelain.  
(interior) enamel and Balm wool.  
Insulation—corkboard and Balm wool.

JOHN HERREL & SONS CO.  
Columbus, Ohio.

Manufacturers of domestic and commercial refrigerators.

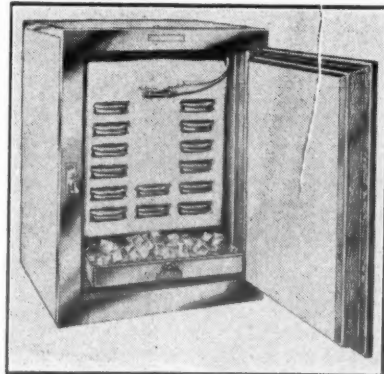
HOWE SCALE CO.  
Rutland, Vt.

Manufacturers of commercial refrigerators.

JEWETT REFRIGERATOR CO.  
2 Leitchworth St., Buffalo, N. Y.

E. B. Jewett, pres.; C. F. Gerhardt, vice-pres.; F. C. Gerhardt, treas. B. A. Simon, secy.

Trade name—JEWETT.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 20.  
Food capacities from 5 to 45 cu. ft.  
Shelf areas from 7 to 50 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) wood, vitreous porcelain.  
(interior) solid porcelain, vitreous porcelain.  
Construction—wood. Insulation—corkboard.  
Hardware by—Dent Hardware Co.  
Gaskets by—Miller Rubber Co.

**Commercial Refrigerators**  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.  
Special stock designs for making ice and ice cubes.

J. S. REFRIGERATION DIVISION  
John Schroeder Lumber Co.

592 Commerce St., Milwaukee, Wis.  
Trade name—THERMO FLO.  
Manufacturers of domestic refrigerators.

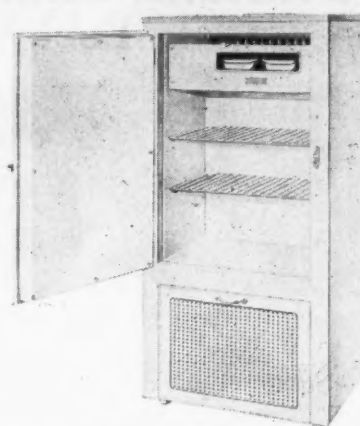
J-T MFG. CO.  
Nashville, Tenn.

A. C. Jones, pres.; Jacob Teller, sales mgr.; L. E. Stephens, secy. and treas.  
Manufacturers of domestic refrigerators for electric refrigeration.

KELVINATOR CORP.  
14250 Plymouth Rd., Detroit, Mich.

C. K. Woodbridge, pres. and gen. mgr.; H. W. Burritt, vice-pres. in charge of sales; Merlin Wiley, secy.; B. A. McDonald, treas.; J. A. Corcoran, adv. mgr.; W. D. Mercer, prod. mgr.

Trade name—KELVINATOR.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 8.  
Food capacities from 4.7 to 12.1 cu. ft.  
Shelf areas from 7 to 19.6 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) lacquer, porcelain.  
(interior) enamel, porcelain.  
Construction—wood, steel. Insulation—corkboard.

**Commercial Refrigerators**  
Mfgs. of wall coolers for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders and salads for food service applications.

KNOX PRODUCTS INC.  
4th St., Wilmington, Del.

Manufacturers of domestic and commercial refrigerators.

KOCH BUTCHERS' SUPPLY CO.  
Kansas City, Mo.

Manufacturers of commercial refrigerators.

KOZY-KITCH KITCHENET CO.  
La Grange, Ind.

Manufacturers of domestic refrigerators.

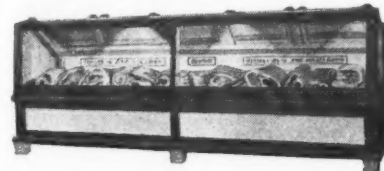
LA CROSSE REFRIGERATOR CORP.  
La Crosse, Wis.

Trade name—LORRAINE.  
Manufacturers of domestic refrigerators.

LIGONIER REFRIGERATOR CO.  
Ligonier, Ind.

W. W. Wood, pres.; J. H. Hoffman, vice-pres.; S. Henoch, secy. and treas.; C. H. Simmons, sales mgr.

Trade name—LIGONIER.



**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers and refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service and short orders for food service applications.  
Special stock designs for hospitals.

C. B. LIVER & CO.  
1502 Capital Ave., Omaha, Nebr.

Manufacturers of commercial refrigerators.

LORILLARD REFRIGERATOR CO.  
85 Grand St., Kingston, N. Y.

Trade name—LORILLARD.  
**Domestic Refrigerators**  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) wood, porcelain, Monel metal.  
(interior) porcelain, glass, tile, galvanized iron.  
Construction—wood. Insulation—cork.  
Hardware by—Grand Rapids Brass Co. and Artistic Bronze Co.  
Gaskets by—E. J. Wirfs Org. and U. S. Rubber Co.

**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers and refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.

LEONARD REFRIGERATOR CO.  
Grand Rapids, Mich.

(See Kelvinator Corp.)

LOUISVILLE REFRIGERATOR CO.  
Louisville, Ky.

H. S. Milton, pres. and secy.; H. P. Dowling, treas.; G. W. Grove, sales mgr.  
Trade name—WHITE SEAL.  
Manufacturers of domestic refrigerators for electric refrigeration.

I. A. LAND CORP.  
1018 S. Wabash, Chicago, Ill.

McKEE REFRIGERATOR CO.  
Brooklyn, N. Y.

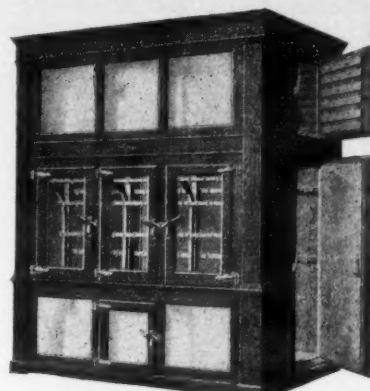
L. H. MACE & CO., INC.  
55 E. 150th St., New York, N. Y.  
Trade name—MACE.

**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 3.  
Food capacities from 5 to 7 cu. ft.  
Capacities (ice) from 25 to 150 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) lacquer, enamel, varnish.  
(interior) enamel, porcelain.  
Construction—metal wood.  
Insulation—Insulite, cork.  
Hardware by—Grand Rapids Brass Co. and Dent Hardware Co.  
Gaskets by—E. J. Wirfs Org. and Jarro Products Corp.

McCAY REFRIGERATOR CO.  
Kendallville, Ind.

E. E. McCay, pres.; H. McCay, vice-pres.; H. M. Stewart, vice-pres. and sales mgr.; J. W. Hart, secy.; R. E. Davis, treas.; R. J. Rehwinkel, adv. mgr.; W. D. Mains, gen. factory supt.; V. I. Stoeckley, pur. agt.

Trade name—McCAY.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 4.  
Food capacities from 5 to 20 cu. ft.  
Number of standard sizes for ice only 8.  
Capacities (ice) from 75 to 400 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain, oak.  
(interior) porcelain.  
Construction—wood, metal.  
Insulation—corkboard.

**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers, refrigerator display cases and freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.

MAINE MFG. CO.  
Nashua, N. H.

P. E. Stevens, pres.; I. B. Stevens, asst. mgr.  
Trade name—WHITE MOUNTAIN.  
Manufacturers of domestic refrigerators.

MARINETTE SHOW CASE CO.  
Marinette, Wis.

Manufacturers of display cases for electric refrigeration.

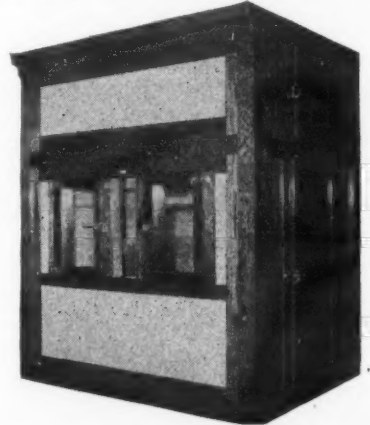
METZ PRODUCTS CORP.  
3051 Rosslyn St., Los Angeles.

Walter Metz, pres.; E. H. Metz, secy. and treas.  
Trade name—METZ.  
Manufacturers of domestic refrigerators for electric refrigeration.

MILBURN REFRIGERATOR CO.  
Kalamazoo, Mich.

B. J. Milburn, pres. and sales mgr.; S. J. Wyckel, vice-pres.; H. A. Crawford, secy. treas., and pur. agt.; F. H. Wetmore, chief engr. and prod. mgr.

Trade name—MILBURN.



**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers and refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.  
Special stock designs for florist shops.

MODERN REFRIGERATOR WORKS  
416 E. 9th St., Los Angeles, Calif.

MOWATT REFRIGERATOR CO.  
25 Oak Grove, San Francisco, Cal.

NORTHEY MFG. CO.  
Waterloo, Iowa.

F. L. Northey, pres. and treas.; F. E. Northey, vice-pres.; V. N. Howe, secy.  
Trade name—NORTHEY.



**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers, refrigerator display cases and freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.

NORTH STAR REFRIGERATOR CO.  
Chattanooga, Tenn.

G. C. Raoul, pres.; E. Y. Chapin, vice-pres.; H. C. Arnold, treas.; R. I. Frazier, sales and adv. mgr.; V. D. Rider, works mgr.; J. M. Alexander, pur. agt.

Manufacturers of domestic refrigerators.

OMAHA FIXTURE & SUPPLY CO.  
11th & Douglas, Omaha, Nebr.

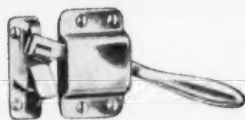
Manufacturers of commercial refrigerators.



**NOVOID CORKBOARD**

For all commercial jobs you will find NOVOID Corkboard Insulation the most satisfactory insulating material for the purpose. It is convenient to use. It comes in 12"x36" and 24"x36" sheets, in 1", 1 1/2", 2", 3", and 4" thicknesses. Shipped in strong fibre containers, each containing 72 board feet. Samples on request.

Write for Catalog E-2  
CORK IMPORT CORP.  
345-349 W. 40th St., New York  
Branches in Principal Cities



Distinctive  
Refrigeration  
Hardware

PATENTED TRIPLOCK  
Winters & Crampton Mfg. Co., Grand Rapids, Mich.

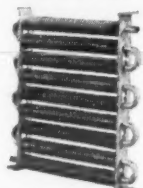
**KERO TEST**

**FORGED BRASS VALVES**  
for Mechanical Refrigeration

Quality Shut-off and Cylinder valves in any standard designs or to your specifications.

KEROTEST MANUFACTURING CO.  
2525 LIBERTY AVENUE  
PITTSBURGH, PENNA.

Specify  
**ROME CONDENSERS**



One Piece Construction

Rome Turney Radiator Co.  
ROME, N. Y.

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**BOSLEY'S**

"Ice Saver" Gasket  
for it is the best uniform quality insulation

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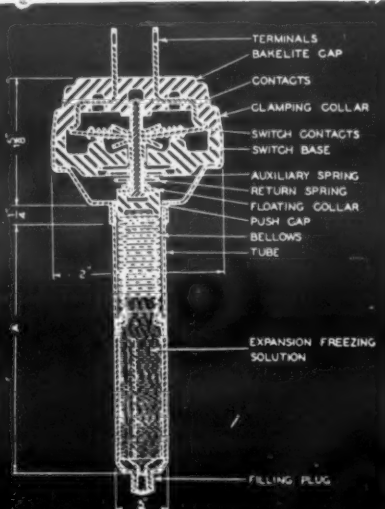
The D. W. Bosley Company  
1901 Carroll Ave. Chicago, Ill.

Refrigerators equip  
with - - -



operate economically

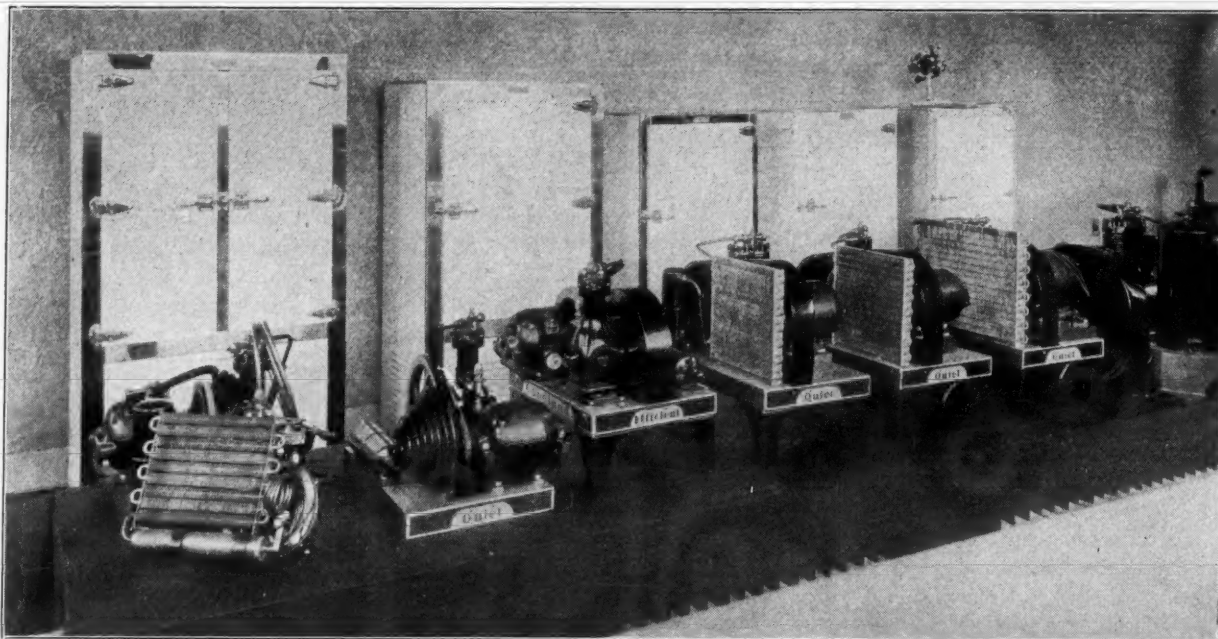
E. J. WIRFS ORGANIZATION, Inc.  
135 S. 17th St., St. Louis, Mo.



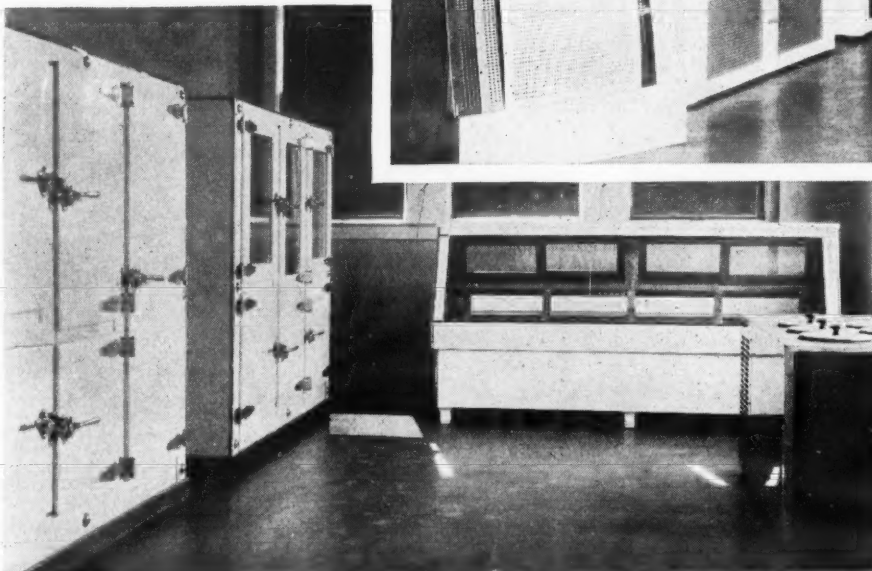
Ranco Thermostat Controls  
have many points of superiority for Household Refrigerators, Ice Cream Cabinets, Water Coolers, Etc.

Write for information  
**THE AUTOMATIC RECLOSING**  
**CIRCUIT BREAKER COMPANY**  
COLUMBUS, OHIO, U. S. A.

## Domestic, Commercial and Apartment Lines Displayed in Lobby of New Copeland Plant, Detroit



Above—Domestic and commercial condensing units and the "N" line of domestic self-contained Copeland models are exhibited in the new show room.



Above—The Copeland Deluxe line with colored tops and louvers. The rack at the left displays the various colors, which are easily interchanged.

Left—Commercial refrigerators, including a walk-in cooler are included in the display.

### METHODS OF PREVENTING INTERFERENCE WITH RADIO BY REFRIGERATOR MOTOR

In a copyrighted article appearing in the *Chicago Daily News*, Nov. 14, K. A. Hathaway offers a number of suggestions regarding methods of reducing or eliminating static caused by poorly-designed electric motors used in some electric refrigerators. Since electric refrigerators have become so numerous there has been an increasing number of requests for information bearing on the elimination of interference from the motors. A motor of the right type will cause no more trouble than is occasioned by the turning on and off of a light in the home, a mere click when the motor starts or stops. However, it appears that some of the refrigerator manufacturers are using other types of motors that cause a great deal of disturbance, and we find a recurrence of the oil-burner static.

There are several methods to be followed in the elimination of the interference, and there is none that can say that any one of the methods will serve the purpose. It may be necessary to do a little experimenting in order that the best type of filter circuit be provided.

**Dirty Brushes Are Blamed**

An arc is the cause of all the difficulty. Dirty brushes on the motor make a contact that does not make and break as it should—performing the operation in advance of the time it should as determined by the design of the commutator. The premature making and breaking of the circuit causes an arc to be set up between the brush and the commutator and that arc is carried all through the building by the power lines, not saying anything about the radiating that takes place immediately surrounding the motor. The arc is high frequency electrical energy. It may or may not be tuned within the broadcast band, but even though it is not, it is broad enough that it will completely blanket several hundreds of kilocycles.

A condenser connected across the lines may stop the interference, but it is seldom

that the problem is solved as easily as that. More often it is possible to connect two condensers in series and then connect the entire assembly across the line, using the center tap as a connection to the ground. In the latter method the radio-frequency currents are corralled and given a path to ground.

**May Need Further Tests**

The condenser bank may not suffice, however, so the person annoyed must resort to further experimentation. The lines feeding the motor must be severed and an inductance or choke coil placed in series with the motor. Then connect the series condensers across the motor terminals with the center tap connected to ground. Do not be satisfied with connecting the center tap of the series condensers to the ground alone, for it is possible that the motor in the refrigerator is not grounded. In this case connect another wire from the ground to the frame of the motor. It is very likely that the interference will be so nearly eliminated that it will be negligible.

If the readers of this article do not care to experiment with the filter units the Dublier Condenser Co. has brought out a filter block that contains just the things that have been mentioned in the foregoing paragraphs. One of the larger type of filter units was installed on a refrigerator in the direct-current district recently, with the result that there was practically no interference, whereas prior to the installation it had been possible to receive but one local station.

The trouble must be eliminated at the source. This is true not only of motors in connection with refrigerators, but flashing signs and any other type of interference producer.

### New Kelvinator Dealer in Hartford Makes Good Start

The Thompson Equipment Co., Inc., 34 Freeman St., Hartford, Conn., and 161 Broad St., Windsor, Conn., have recently been appointed agents for Kelvinator and have already been credited with 25 installations.

Every electric refrigerator dealer needs the News to keep abreast of progress. Subscription coupon on page 24. Sign and mail it now.

**LASSEN — TEMPERATURE — CONTROLS**  
POSITIVE RANGE AND DIFFERENTIAL ADJUSTMENT  
NON-DETERIORATING MERCURY TUBE SWITCH—MEET ALL REQUIREMENTS  
**GOODNOW & BLAKE MFG. CO.** 3840 BEAVER STREET  
DETROIT, MICH.

TRADE MARK  
**EXTRA DRY ESOTOO**  
**THE PUREST**  
**SULPHUR DIOXIDE**  
Analysis Guaranteed  
We have an agent, with our product in stock, near you  
Wire us where we can serve you  
**VIRGINIA SMELTING CO., WEST NORFOLK, VA.**  
F. A. EUSTIS, Secretary 131 STATE ST., BOSTON 2 Rector St., NEW YORK

### A Lacquer Finish That Has Stood The Test **M & W REFRIGERATOR** **LACQUER ENAMELS**

A Quality Reputation on these products has been established through actual large quantity production on Cabinets widely distributed throughout the world.

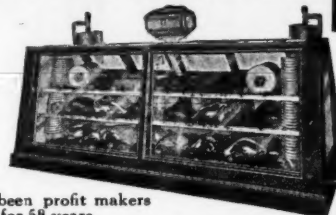
Another complete M & W Finish including either Lacquer or Oil Primer followed by M & W Lacquer Enamel in White or Colors.

We invite your correspondence regarding your particular problems.

**MAAS & WALDSTEIN CO.**  
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AVENUE, NEWARK, N. J.

CHICAGO OFFICE  
AND WAREHOUSE  
11 Washington Blvd. West

LOS ANGELES OFFICE  
AND WAREHOUSE  
1212 Venice Blvd., Los Angeles, Cal.

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Have been profit makers for 56 years.

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John and Livingston Streets  
Cincinnati, Ohio

**FLINTLOCK CONDENSERS**

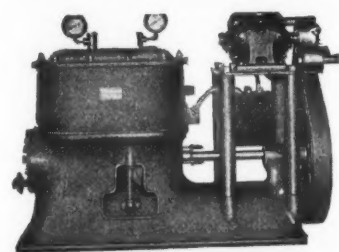
Efficient—Economical  
Compact

Greater Efficiency  
at Less Cost

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**FLINTLOCK CORPORATION**

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DETROIT, - - MICH.

**ELECTRIC REFRIGERATION DISTRIBUTORS AND DEALERS**

You need the **PEERLESS** line of commercial units.

**PEERLESS** units give you a COMPLETE line, ranging from 1 to 10 tons.

Sixteen years of successful manufacturing and merchandising of ice machines are behind the **PEERLESS** name. Our record warrants your most exacting investigation.

Write or Wire

**PEERLESS ICE MACHINE CO.**  
515 W. 35th St.  
CHICAGO, ILL.



# Directory of Manufacturers Of Refrigerator Cabinets (Continued)

**OTTENHEIMER BROS., INC.**  
Fallsway & Hiller Sts., Baltimore, Md.  
R. E. Ottenheimer, pres. and gen. mgr.; B. M. Ottenheimer, vice-pres.; S. M. Ottenheimer, secy.; E. Rose, treas.; Ga. Taylor, sales mgr.; E. S. Ottenheimer, adv. mgr.; J. Rohrer, Sr., chief engr.; J. B. Ottenheimer, prod. mgr. and pur. agt.  
Trade name—OREOLE, REOLITE, REOL.

**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 7.  
Food capacities from 9 to 64 cu. ft.  
Shelf areas from 8 to 28 sq. ft.  
Number of standard sizes for ice only 3.  
Capacities (ice) from 100 to 200 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) enamel (interior) porcelain.  
Construction—wood Insulation—cork.  
Manufacturers of commercial refrigerators.

**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers and refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.  
Special stock designs for florists.

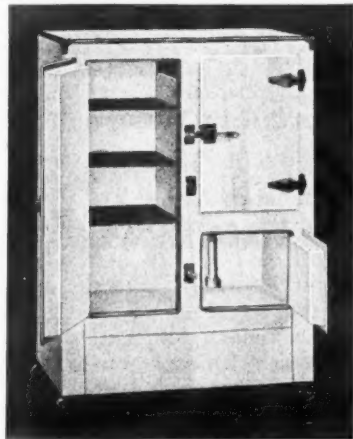
**PHILLIPS REFRIGERATOR CO.**  
393 Keele St., Toronto, Ontario, Canada.  
S. Phillips and F. A. Phillips, owners.  
Trade name—PHILLIPS.

**PLYMPTON REFRIGERATOR CO.**  
Ellwood City, Pa.  
T. A. Daley, pres.; D. C. Hamilton, vice-pres.; H. B. Beighley, gen. mgr., secy. and treas.; H. L. Semans, chief engr.  
Trade name—PLYMPTON.

**PROGRESS REFRIGERATOR CO.**  
621 W. Main St., Louisville, Ky.  
W. L. Hollis, pres.; C. C. Cloud, vice-pres.; C. V. Edmonds, secy. and treas.  
Trade name—PROGRESS.  
Manufacturers of domestic refrigerators for electric refrigeration.

**PUFFER-HUBBARD MFG. CO.**  
86 & 32nd Ave., Minneapolis, Minn.

**RANNEY REFRIGERATOR CO.**  
Greenville, Mich.  
E. W. Ranney, pres.; L. W. Ranney, vice-pres.; S. C. Cutler, asst. secy.; H. N. Clement, treas.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 6.  
Food capacities from 6.6 to 8.8 cu. ft.  
Shelf areas from 5.5 to 7.85 sq. ft.  
Number of standard sizes for ice only 42.  
Capacities (ice) from 25 to 150 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) lacquer.  
(interior) enamel, porcelain.  
Construction—metal. Insulation—corkboard.

**Commercial Refrigerators**  
Mfgs. of wall coolers and refrigerators display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service and short orders for food service applications.

**REFRIGERATING EQUIPMENT CO.**  
Wilmington, Del.  
Formed by merger of Knox Products Co., Wilmington, Del. and Glacier Corp., Kennett Square, Pa. S. P. Ker, Jr., pres.; G. B. Scarlett, vice-pres.; W. W. White, secy. and treas.; W. G. Finch, sales engr.; C. O. Duevel, Jr., rfg. engr.

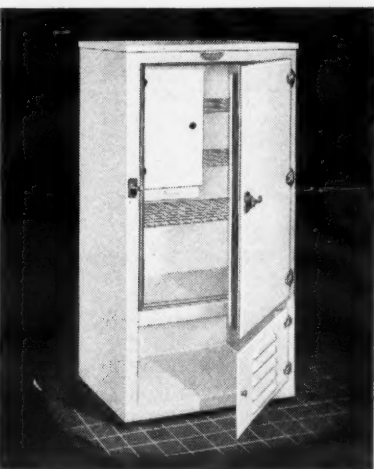
**RENFREW REFRIGERATOR CO., LTD.**  
Renfrew, Ontario, Canada.  
T. A. Low, pres.; F. D. Vickers, vice-pres. and gen. mgr.; D. E. Stone, secy. and treas.; K. Gannon, sales mgr.; W. J. Beattie, chief engr. and prod. mgr.; A. M. Bossence, pur. agt.  
Trade name—BARNET, RENFREW.

**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 9.  
Food capacities from 3.7 to 20 cu. ft.  
Shelf areas from 5.2 to 17.2 sq. ft.  
Number of standard sizes for ice only 7.  
Capacities (ice) from 45 to 100 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) wood, enamel.  
(interior) enamel, porcelain.  
Construction—wood. Insulation—corkboard.  
Hardware by—Hahn Brass, Larsen & Shaw.  
Winters & Crampton.  
Gaskets by—E. J. Wirfs Org., Dennis.

**REX MFG. CO.**  
Connorsville, Ind.  
C. C. Hull, pres.; M. L. Hull, vice-pres.; J. M. Heron, secy. and treas.; J. T. McKinney, adv. mgr.; Edgar Myers, sales mgr.  
Trade name—REX.

**Domestic Refrigerators**  
Food capacities from 4 to 15 cu. ft.  
Shelf areas from 7.2 to 24.6 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) lacquer, porcelain.  
(interior) enamel, porcelain.  
Construction—metal, wood. Insulation corkboard.  
Gaskets by—E. J. Wirfs Org.  
**Commercial Refrigerators**  
Mfgs. of refrigerator display cases for food stores.

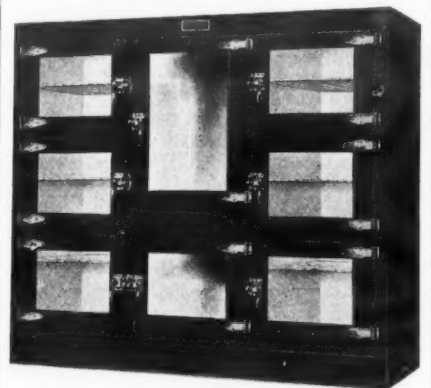
**RHINELANDER REFRIGERATOR CO.**  
Rhineland, Wis.  
R. A. Reik, gen. mgr.  
Trade name—AIRTITE, RHINELANDER.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 18.  
Food capacities from 3.75 to 20 cu. ft.  
Shelf areas from 3.34 to 21 sq. ft.  
Number of standard sizes for ice only 47.  
Capacities (ice) from 35 to 210 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain, lacquer.  
(interior) porcelain, enamel.  
Construction—wood, metal  
Insulation—corkboard.

**Commercial Refrigerators**  
Sixteen models for food stores.  
**FAY RODGERS REFRIGERATOR WORKS**  
P. O. Box 2573, Memphis, Tenn.

**RUDDY MFG. CO., LTD.**  
Brantford, Ontario, Canada.  
Joseph Ruddy, pres.; George Mathews, vice-pres.; R. K. Rudy, secy. and treas.; W. J. Freeborn, wks. mgr.  
Trade name—BRANTFORD.



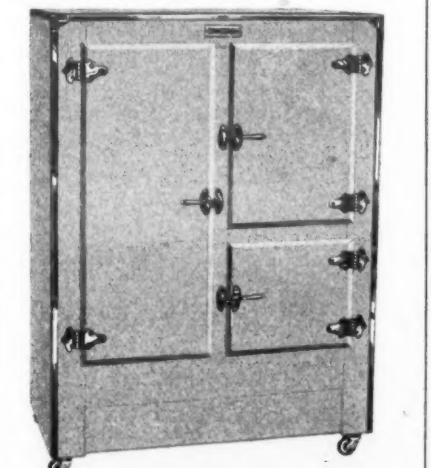
**Domestic Refrigerators**  
Food capacities from 6.5 to 12 cu. ft.  
Capacities (ice) from 90 to 190 lbs.

**SANDERSON-HAROLD CO., LTD.**  
Paris, Ontario, Canada.  
John Harold, pres. and gen. mgr.; E. M. Harold, secy., treas. and sales mgr.  
Trade name—PARIS.

**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 41.  
Food capacities from 2.5 to 38 cu. ft.  
Shelf areas from 4 to 35.5 sq. ft.  
Number of standard sizes for ice only 22.  
Capacities (ice) from 35 to 400 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) enamel (interior) porcelain.  
Construction—wood Insulation—corkboard.  
Hardware by—Grand Rapids Brass Co., and Winters & Crampton.  
Gaskets by—E. J. Wirfs Org., Dennis.

**Commercial Refrigerators**  
Mfgs. of wall coolers and refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service and short orders for food service applications.

**SANITARY REFRIGERATOR CO.**  
Fond du Lac, Wis.  
Trade name—SANITARY.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 17.  
Food capacities from 2.1 to 7 cu. ft.  
Shelf area from 5 to 8.4 sq. ft.  
Number of standard sizes for ice only 38.  
Capacities (ice) from 41 to 70 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) enamel.  
(interior) enamel, porcelain.  
Construction—metal.  
Insulation—cork with Celotex or Insulite.  
**Commercial Refrigerators**  
Mfgs. of wall coolers for food stores.  
Mfgs. of refrigerators for pantry or kitchen service for food service applications.

**C. SCHMIDT CO.**  
John & Livingston Sts., Cincinnati, Ohio.  
J. H. Ahrens, pres. and gen. mgr.; H. C. Ahrens, vice-pres.; A. E. Schmidt, vice-pres.; J. A. Geiser, treas.; E. J. Ahrens, secy.

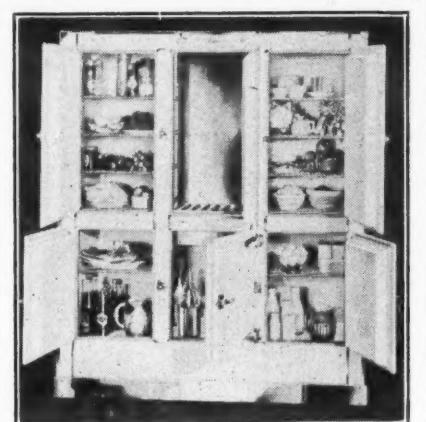
Trade name—THESCO.  
Domestic refrigerators built to order; model for apartments carried in stock.

**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers, refrigerator display cases and freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders, sea foods and salads for food service applications.  
Special stock designs for florists, diet kitchens, mortuaries.

**SAVORY, INC.**  
90 Alabama St., Buffalo, N. Y.  
G. R. LeSavage, pres. and gen. mgr.; J. F. Foster, Jr., adv. mgr.  
Trade name—SAVORY.

**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 3.  
Food capacities from 7 to 15 cu. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain. (interior) porcelain.  
Construction—metal. Insulation—corkboard.  
Gaskets by—E. J. Wirfs Org.

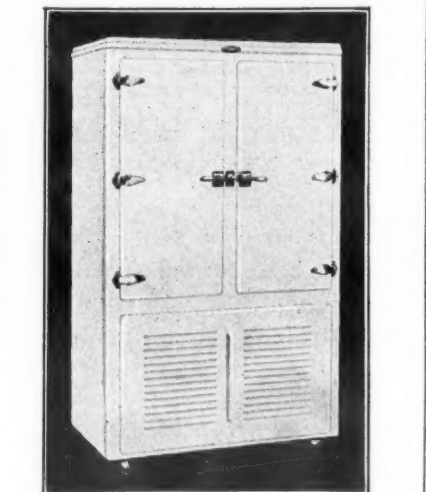
**SEEGER REFRIGERATOR CO.**  
St. Paul, Minn.  
J. A. Seeger, pres.; W. G. Seeger, vice-pres.; G. R. Seeger, secy. and treas.; J. J. Leonard, sales mgr.; S. Greve, adv. mgr.; R. S. Ahrens, chief engr.; R. Colton, prod. mgr.; E. Benson, pur. agt.  
Trade name—SEEGER.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 7.  
Food capacities from 6 to 16 cu. ft.  
Shelf areas from 9 to 23 sq. ft.  
Capacities (ice) from 75 to 300 lbs.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) porcelain (interior) porcelain.  
Insulation—corkboard.

**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers and refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service, short orders and sea foods for food service applications.

**SERVEL, INC.**  
Evansville, Ind.  
F. E. Smith, pres.; W. F. Thatcher, vice pres.; H. W. Foulds, vice-pres.; D. L. Adkins, secy.; P. Newhall, treas.; W. Reynolds, adv. mgr.; F. B. Nehrbas, prod. mgr.; A. R. Sager, pur. agt.  
Trade name—SERVEL.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 4.  
Food capacities from 5 to 10 cu. ft.  
Shelf areas from 7.2 to 12.5 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) enamel with lacquer finish.  
(interior) vitreous porcelain.  
Construction—wood, metal. Insulation—corkboard.  
Gaskets by—E. J. Wirfs Org.

**SHERER-GILLET CO.**  
Marshall, Mich.  
W. T. Sherer, pres.; R. P. Sherer, vice-pres.; R. W. Goodnow, secy.; R. F. Grant, treas.; K. D. Zenker, adv. mgr.; A. W. Ruddock, pur. agt.  
Trade name—HONOR BIL.

**Commercial Refrigerators**  
Mfgs. of refrigerator display cases and freezer display cases for food stores.  
Mfgs. of sea foods and salads for food service applications.

**SMOOT-HOLMAN CO.**  
Ingleswood, Cal.  
Trade name—KOOL-KASE.

C. E. Smoot, pres.; G. W. Holman, vice-pres.; C. H. Feldt, secy. and treas.; J. H. Batteiger, gen. mgr.; G. M. Fletcher, supervisor of sales.

**Commercial Refrigerators**  
Mfgs. of refrigerator display cases and freezer display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service and sea food for food service applications.

**STANDARD REFRIGERATOR CO., INC.**  
2539 Germantown Ave., Philadelphia, Pa.  
**Commercial Refrigerators**  
Mfgs. of wall coolers, walk-in coolers and refrigerator display cases for food stores.  
Mfgs. of refrigerators for pantry or kitchen service and sea food for food service applications.  
Special stock designs for florists.

**ST. LOUIS BUTCHERS & HOTEL SUPPLY CO.**  
St. Louis, Mo.  
Manufacturers of commercial refrigerators.

**SUCCESS MFG. CO.**  
Gloucester, Mass.  
Trade name—SUCCESS.

**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 7.  
Gross capacities from 8 to 42 cu. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) lacquer and enamel.  
(interior) lacquer and enamel.  
Construction—metal. Insulation—Balsam wool.

**TENNESSEE FURNITURE CORP.**  
Chattanooga, Tenn.  
R. T. Frazier, sales mgr.

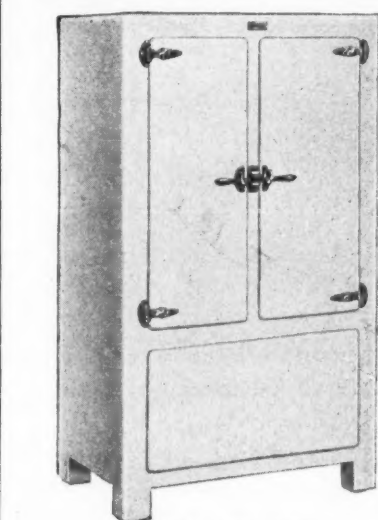
**TROTTER REFRIGERATOR CO.**  
Rochester, N. Y.

**VIKING REFRIGERATORS, INC.**  
Kansas City, Mo.

**VOGT REFRIGERATOR CO.**  
616 Barret Ave., Louisville, Ky.

**WARD REFRIGERATOR CO.**  
6901 S. Alameda, Los Angeles.

**WELSBACH CO.**  
Gloucester City, N. J.  
Sidney Mason, pres.; Townsend Stites, vice pres.; R. W. Baker, gen. supt.; G. W. Curran, secy.; I. W. Morris, treas.; F. A. Wegener, chief engr.; Whitney Kirk, pur. agt. refrigeration division; H. R. Lukens, gen. mgr.; R. R. Thompson, sales mgr.; W. R. M. Very, sales pro. mgr.  
Trade name—WELSBACH.



**Domestic Refrigerators**  
No. of standard sizes designed especially for electric refrigeration 7.  
Food capacities from 5.25 to 8 cu. ft.  
Shelf areas from 8.5 to 12 sq. ft.  
Following data applies only to models designed especially for electric refrigeration.  
Finish (exterior) lacquer. (interior) porcelain.  
Construction—wood, metal. Insulation—cork.

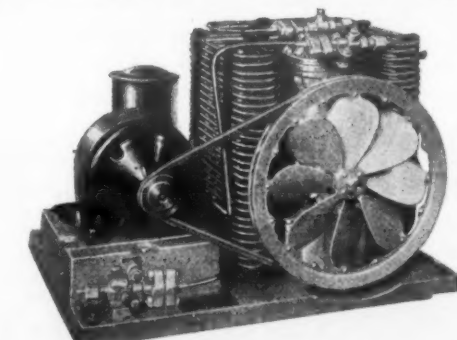
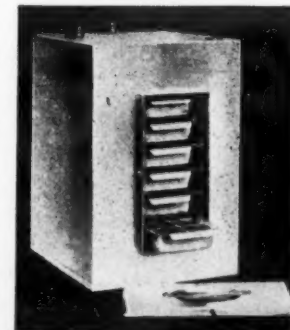
**WISCONSIN REFRIGERATOR CO., INC.**  
Eau Claire, Wis.

## NOTICE TO MANUFACTURERS

This list of manufacturers will be included in a complete directory of all classifications of refrigeration equipment to be published Jan. 2, 1929. Please notify the editor at once regarding errors or omissions so that corrections may be made in this Annual Catalog and Directory Number.

## Nationally Advertised Refrigerating Machine—Sold at Less Than Cost

Due to Liquidation  
Single Units  
Complete with Tanks  
\$60.00 each



Model No. 21 [Domestic Type]

Design, construction and workmanship of the very best, adaptable for methol chloride or sulphur dioxide. Compressors and high side complete with one-fourth h. p. motor, belt, pressure control float valve; and chilling tank.

**Refrigerating Equipment  
Liquidating Company**  
Vernon Industrial Building  
Harrisburg, Pa.

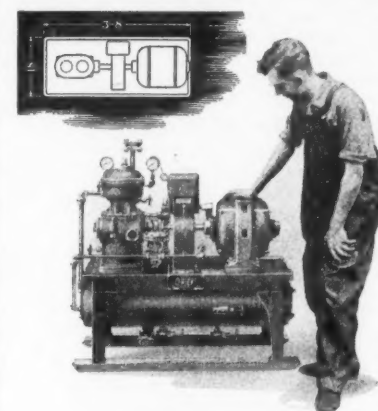
## NEWS CORRESPONDENTS AND SUBSCRIPTION REPRESENTATIVES WANTED IN EVERY COMMUNITY

Electric Refrigeration News is appointing representatives to report local news and accept subscriptions. Only those actively connected with the electric refrigeration business are desired.

The plan calls for young men and women who are well known in the trade and who are interested, in keeping in touch with affairs of the community. A letter to the News every two weeks reporting events of interest will be sufficient to meet the needs in most localities.

The subscription work consists of making up a list of the distributors, dealers and important members of local companies for sample copy mailings. Subscription blanks will be enclosed with your name imprinted there on so that you will be credited with returns. Blanks will be furnished for receiving subscriptions secured direct. Suitable payment is made for the service. Full information on request.

Electric Refrigeration News, 550 Macca-bees B'dg., Detroit, Mich.



Small Space  
Required for the  
**FRICK**  
Refrigerating Unit

As builders of commercial refrigerating equipment for nearly fifty years, we have incorporated in our designs the features of compactness, pleasing appearance, economy and reliability, that insure success.

Distributors for Available  
Territory Wanted

